

SITING COMMITTEE WORKSHOP
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Exploring Revisions to)
Current Interconnection) Docket No.
Rules Between Investor-) 99-DIST-GEN-(2)
owned and Publicly-owned)
Utility Distribution)
Companies and Distributed)
Generators)
)
Evaluating CEQA Procedures)
for Siting Distributed)
Generation Facilities)
-----)

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
HEARING ROOM A
SACRAMENTO, CALIFORNIA

THURSDAY, APRIL 20, 2000

10:00 A.M.

Reported by:
Debi Baker
Contract No. 150-99-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMITTEE MEMBERS PRESENT

Robert Laurie, Presiding Member

Robert Pernell, Associate Member

STAFF PRESENT

Ellen Townsend-Smith, Advisor to
Commissioner Pernell

Scott Tomashefsky

Judy Grau

Chris Tooker

ALSO PRESENT

Shirley Rivera
Resource Catalysts

Jeff Wilson
California Environmental Protection Agency
Air Resources Board

Steven Greenberg
Intergy Power

Kevin Duggan
Capstone Turbine Corporation

David Reinhart
Sacramento Municipal Utility District

Chris Kinne
California Environmental Protection Agency

Kenneth J. Lim
Bay Area Air Quality Management District

Sheryl Carter
Natural Resources Defense Council

Jack Brunton
SEMPRA

ALSO PRESENT

Matt Puffer
Engine World

Eileen M. Smith
Solar Development Cooperative

Winston Potts
California Air Resources Board

Manuel Alvarez
Southern California Edison Company

Mohsen Nazemi
South Coast Air Quality Management District

Eric Wong
Electric Power Group
Caterpillar

Jerry Steele
Monterey Bay Unified Air Pollution Control
District

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1 P R O C E E D I N G S

2 10:05 a.m.

3 PRESIDING MEMBER LAURIE: Ladies and
4 gentlemen, good morning. Welcome to the workshop
5 on evaluating distributed generation CEQA and
6 permit process streamlining.

7 My name is Robert Laurie, Commissioner
8 at the Energy Commission, and Presiding Member of
9 the Siting and Environmental Committee. To my
10 right is my colleague on the Committee,
11 Commissioner Robert Pernell.

12 COMMISSIONER PERNELL: Good morning.

13 PRESIDING MEMBER LAURIE: To
14 Commissioner Pernell's right is Commissioner
15 Pernell's Advisor, Ellen Townsend-Smith.

16 This workshop is being broadcast over
17 the internet, so we want to make sure that when
18 you speak you're at the microphones and I will ask
19 your accommodation in that regard.

20 We are also transcribing it, so the
21 reporter is firmly in charge of this meeting. And
22 at anytime we have to halt the proceeds for any
23 purpose she will so advise.

24 This workshop is in direct response to
25 the PUC's October 21, 1999 order instituting

1 rulemaking. Section K of the OIR directs the
2 Energy Commission to quote, "hold a workshop as
3 part of the second phase issues, to discuss
4 whether local government agencies can use a
5 streamlined CEQA process for the siting of certain
6 types of distributed generation facilities."

7 In addition, based upon comments heard
8 earlier, in the earlier rulemaking, as well as
9 input from CADER and it's various workshops that
10 that organization has held, our staff and the
11 Commission had agreed also to include an
12 examination of streamlining the permit process
13 necessary for distributed generation, as part of
14 this workshop, as well.

15 In addition, given the fact that air
16 quality is one of the predominate issues
17 associated with DG permitting, staff has worked in
18 consultation with the ARB Staff, primarily Mr.
19 Jeff Wilson, to develop the scoping session for
20 today's workshop. Mr. Wilson will be making a
21 presentation that includes the results of a study
22 done for the ARB to look at potential DG
23 penetration over the next ten years.

24 The goal of today's workshop is to
25 receive written and oral responses to the scoping

1 questions as earlier propounded to you all, as
2 contained in the April 5th workshop notice.

3 We want to provide an opportunity to
4 hear from all interested parties, and they include
5 primarily distributed generation developers, state
6 agencies, but also permitting authorities, which
7 in this case will be primarily local governments.

8 The goal is to develop a plan and
9 timeline for moving forward. We are obligated to
10 report to the Commission by September, and I'll
11 ask the program manager, Judy Grau, to talk about
12 that further.

13 Before we do proceed I do want to thank
14 staff for their work up to this point. I don't
15 know how many of the team is here, but it includes
16 Mignon Marks. Mignon is here. Robert Cervantes,
17 Scott Tomashefsky, Jeff Ogata and Judy Grau.

18 Before I turn it over to Ms. Grau,
19 Commissioner Pernell, do you have any opening
20 comments?

21 COMMISSIONER PERNELL: Not at this time.
22 I'll reserve my comments, thank you.

23 PRESIDING MEMBER LAURIE: Thank you,
24 Commissioner.

25 Ms. Grau.

1 MS. GRAU: Thank you, Commissioners, and
2 good morning, everyone.

3 (Pause.)

4 MS. GRAU: If you haven't already done
5 so, we do have a sign-in sheet on the back table
6 back there. And we ask you to please sign in.

7 Also on the back table we have copies of
8 the workshop notice with the scoping questions,
9 the agenda for today's workshop.

10 And I would also like to acknowledge the
11 five sets of written comments we have received so
12 far. They include Monterey Bay Unified Air
13 Pollution Control District; San Joaquin Valley Air
14 Pollution Control District; Bay Area Air Quality
15 Management District; Solar Development
16 Cooperative; and San Luis Obispo Air Pollution
17 Control District. Those are also on the back
18 table.

19 And for those of you out in internet
20 land who may be listening, we'd like you to be
21 able to participate to the extent possible. If
22 you email me at jgrau@energy.state.ca.us I'll try
23 to check my email during the lunch break and the
24 afternoon break, and then I can convey your
25 thoughts to the group here.

1 Also, to the extent that today's
2 speakers provide me with an electronic copy of
3 their presentations, and to the extent that they
4 give their permission to post their material, we
5 will try to post these presentations on our
6 website, www.energy.ca.gov/distgen/index.html.

7 And now I'd like to discuss today's
8 agenda, which is also on the back table.
9 Following my presentation we'll hear an overview
10 on the CEQA process and permitting considerations
11 for distributed generation. We'll be using the
12 acronym DG, that stands for distributed
13 generation. This will be given by Shirley Rivera,
14 Principal with Resource Catalysts.

15 Then we'll have Jeff Wilson of the
16 California Air Resources Board Staff make a
17 presentation. And that includes the results of a
18 consultant study on distributed generation
19 penetration scenarios in the future.

20 And we will then hear from Steven
21 Greenberg of Intergy Power about his permitting
22 experiences with the Pleasanton Power Park; from
23 Kevin Duggan with Capstone Turbine, a manufacturer
24 of microturbines; and David Reinhart of the
25 Sacramento Municipal Utility District regarding

1 SMUD's experiences with city and county permit
2 agencies, as they relate to SMUD's PV Pioneer II
3 Program.

4 Then we'll have a lunch break from about
5 noon to 1:00, and after that we'll hear from Chris
6 Kinne of the California Environmental Protection
7 Agency; Ken Lim of the Bay Area Air Quality
8 Management District; and Sheryl Carter of the
9 Natural Resources Defense Council.

10 And we would then like to take comments
11 from the public. We have a half-hour session from
12 2:00 to 2:30. And to that end, I've already
13 received a couple of these blue cards from folks.
14 If you would like to speak during that half-hour
15 session, please fill out one of these cards on the
16 back table. Return them to me, or up on the
17 podium as soon as possible, and that will let us
18 know how much time we can give each person.

19 (Pause.)

20 MS. GRAU: We're going to take about a
21 five-minute break to see if we can get the
22 microphones working.

23 (Brief recess.)

24 PRESIDING MEMBER LAURIE: I should note
25 for the record that the responsibility for setting

1 up today's sound system rests with our new
2 Commissioner, Commissioner Art Rosenfeld --

3 (Laughter.)

4 PRESIDING MEMBER LAURIE: -- who happens
5 still to be in Washington, D.C., and has not, as
6 yet, been sworn in. But nevertheless, he is not
7 here.

8 I will not --

9 MS. GRAU: And he may be listening on
10 RealAudio.

11 (Laughter.)

12 PRESIDING MEMBER LAURIE: You didn't
13 tell me that. I will not repeat my opening
14 remarks. I will turn immediately over to Ms. Judy
15 Grau. Judy.

16 MS. GRAU: Okay. Following up from
17 where I think I left off, after the break where we
18 hear public comments this afternoon, we'd like to
19 talk about next steps as they relate to both CEQA
20 streamlining and permit process streamlining. And
21 we'd like to get everyone's thoughts on what could
22 and should be reasonably accomplished over the
23 next few months.

24 Our schedule for this, as of right now,
25 our final input is due to the PUC, Public

1 Utilities Commission, in early September.

2 So, working back from that, from today's
3 workshop we'd like to have a staff workshop report
4 out by the end of June. Followed by a Siting
5 Committee hearing.

6 And then in early July there would be
7 deadline for written comments on the staff
8 workshop report.

9 Mid-July would be a Siting Committee
10 meeting to release the draft recommendation for
11 review.

12 Early August the parties would file
13 comments with the Energy Commission on the draft
14 recommendations.

15 And then late August to early September
16 would be CEC adoption of the final
17 recommendations, and transmitting them to the PUC.

18 So we do have a lot we can potentially
19 accomplish in the next couple of months.

20 With that, I'd like to get started by
21 giving a brief presentation on distributed
22 generation technologies so that we have a common
23 understanding of what we're dealing with today, as
24 it relates to possible CEQA streamlining and
25 possible permit process streamlining.

1 And also for all of our speakers I would
2 ask that you try to hold your questions until the
3 end of each presentation to help us get through it
4 a little quicker.

5 I would like to start with a definition
6 of distributed generation. This is the one that
7 has been used in this -- OIR, by the way, stands
8 for order instituting rulemaking. That's the
9 proceeding which our investigation is feeding
10 into.

11 And distributed generation is defined as
12 generation storage or demand side management
13 devices, measures and/or technologies that are
14 connected to or injected into the distribution
15 level of the transmission and distribution grid.

16 They can be located on customer
17 premises, on either side of the meter, either the
18 customer side or the utility side; or they may be
19 located at other points in the distribution
20 system, such as a utility substation.

21 This is a graphic. On the left is a
22 typical central generation scenario where you have
23 large power plants that feed into the transmission
24 grid, and then from the transmission grid at lower
25 voltages goes out to the distribution system to

1 businesses and residences and other customers.

2 On the right is a vision of a system
3 where central station still plays a major role, as
4 you will see. We still need our large
5 interconnected transmission system, but there may
6 be other distributed generation devices that
7 support the system located at or near customers;
8 and they can include all of these technologies
9 that you see here.

10 I've divided this into three areas:
11 fossil fuel based distributed generation; non-
12 fossil based generation; and then storage
13 technologies. I'll talk a little bit about each
14 one.

15 Some of the common traits to distributed
16 generation -- the other acronym you may hear, by
17 the way, is DER, distributed energy resources --
18 they tend to be or can be mass produced; modular;
19 small, anywhere from a few kilowatts to perhaps 20
20 megawatts.

21 They can be used to support system
22 reliability. They may provide an economic
23 advantage to end users or energy service
24 providers, and or the utility distribution
25 company. And they can provide customers and the

1 utility distribution companies with alternatives
2 to standard central station generation.

3 These are some of the benefits that may
4 occur, depending on the distributed generation
5 installation. May offer one or more of these
6 advantages. Utilities are interested in
7 distributed generation from the standpoint of
8 deferring or reducing transmission and
9 distribution investment. And also possibly
10 increasing distribution grid reliability and
11 stability.

12 So getting into the fossil fuel
13 technologies, they include internal combustion
14 engines, which can be fueled either by diesel or
15 natural gas, or a hybrid combination of the two,
16 dual-fueled engines.

17 A relatively new technology called
18 microturbines; fuel cells; and Stirling engines.
19 I've got a picture, a couple photographs here.
20 This is a Caterpillar. Eric, can you tell me how
21 big this is? Do you recognize it?

22 I don't mean physical size, I mean
23 output. Okay. Here's another picture of several
24 Caterpillar engines. The diagram on the left is a
25 Capstone microturbine, 30 kilowatt product? Yes.

1 And the photo on the right is an installed Bowman
2 microturbine.

3 Now, with respect to the fossil fuel
4 distributed generation, this is a little
5 comparison table of the technologies I just
6 mentioned, including their commercial
7 availability, some of the size ranges and costs,
8 and what fuels they can be fueled with. And the
9 typical duty cycles.

10 I'm not going to spend a lot of time on
11 these. This is just kind of an overview, and you
12 all have the handout on this.

13 Here's some emissions figures for some
14 of these. Again, these vary. These may not be
15 the same numbers that other people will be
16 presenting today. And I think that just goes to
17 different sources, as well as the fact that in
18 many cases there's not a well defined set of
19 emission standards.

20 Renewables include photovoltaics or PVs;
21 solar dish Stirling; small-wind and large-wind
22 systems; also Stirling engines, which you saw
23 under natural gas or fossil fuel, can also be
24 fueled by biomass or landfill gas.

25 This is a picture of a PV installation,

1 13 kilowatts, that's used on a rooftop. So, it's
2 providing shade, as well as electricity in this
3 application.

4 This is a hybrid solar/photovoltaic and
5 wind system. And, again, a comparison table of
6 commercial availability, size and cost and such as
7 you saw with the natural gas/fossil fuel
8 technologies.

9 Storage technologies include batteries'
10 modular pumped hydro; SMES, which is
11 superconducting magnetic energy storage;
12 flywheels; and ultracapacitors.

13 And this is an example of a flywheel
14 storage technology, 2 kilowatt hour capacity.

15 And this is a superconducting magnet
16 energy storage. I'm not sure of the size on this,
17 I wasn't able to verify that.

18 And here's a mobile unit. This is used
19 for power quality, so it's not a long duration
20 storage technology, but just to get over a one- or
21 two-second blip in power, to help ride through
22 that.

23 This slide just shows the different
24 types of customers, industrial, commercial,
25 residential and utility distribution companies, of

1 the various technologies who are the most likely
2 candidates to want to employ these technologies.

3 And permitting issues, I'm going to
4 actually leave this to Shirley Rivera to talk
5 about permitting. And then Jeff Wilson to talk
6 about air quality.

7 But just really briefly, some of the
8 things we've heard through our association with
9 the California Alliance for Distributed Energy
10 Resources, CADER, as it's known, are that there is
11 a slow review of distributed generation projects
12 because of several reasons:

13 One, that there are no consolidated set
14 of siting requirements or universally accepted
15 standards. And all the impacts and benefits are
16 not well defined.

17 Permit overload, maybe some day. Right
18 now we're not seeing it, but that's one of the
19 reasons we invited so many local building
20 officials, air quality folks and planners is
21 because some people hold the vision that perhaps
22 10 to 30 percent of all new generation in the
23 state could come from distributed generation.

24 And unlike permitting one 500-megawatt
25 plant like the Energy Commission does, you may

1 see, locals may be seeing 500 1-megawatt
2 facilities. And so because of that, we'd like to
3 see what we can do, as appropriate, to make the
4 process easier for local governments to deal with
5 these.

6 Some of the air quality issues that we
7 have heard are that these technologies, some of
8 them are small enough that they don't trigger
9 thresholds, and yet cumulatively their impacts
10 could be quite significant.

11 However, we don't know at this time what
12 distributed generation technologies will -- what
13 type and size will be the most common that locals
14 will be seeing in the next five years. And so
15 they could range from the very clean wind or PV
16 technologies to some of the fossil-fuel based ones
17 that may come in under thresholds, but contribute
18 significantly cumulatively.

19 I think that concludes my presentation.
20 Are there any questions?

21 Yes.

22 PRESIDING MEMBER LAURIE: Excuse me, we
23 need the question on the record, so if you can
24 come to the center microphone, please.

25 MS. SMITH: My name is Eileen Smith.

1 I'm with the Solar Development Cooperative. And
2 thank you, it was very informative.

3 I'm curious to know a little bit more
4 about some of these storage technologies. I'm not
5 familiar with flywheel or magnetic energy storage.
6 Just was wondering how those compared, in terms of
7 materials and recyclability, to batteries.

8 MS. GRAU: That I'm afraid I can't
9 answer. The staff expert on storage technologies
10 is not here today, and I got this material from
11 him.

12 The Energy Commission has put out a
13 document called The Energy Aware Planning Guide,
14 and in there we have a description of the various
15 technologies, including many of these storage
16 technologies.

17 And I know in there we have a matrix of
18 each technology as it relates to air quality,
19 hazardous materials and such; and whether it's no
20 impact, moderate or severe.

21 I would have to go back and look at
22 that. And if you remind me, I can look that up
23 during a break and get back to you on that.

24 Anything else?

25 Okay, with that, I'd like to turn it

1 over to Shirley Rivera of Resource Catalysts.

2 MS. RIVERA: Good morning,
3 Commissioners. Judy, thank you very much.

4 I want to say really quickly that we had
5 mentioned CADER. I will, as part of this process,
6 just note that I've been involved in CADER efforts
7 since 1996 on the Siting and Environmental
8 Committee.

9 And some of what you'll be seeing today
10 we had presented at a business meeting back in May
11 of '98, and I'm glad to say that as things have
12 continued to evolve, we've had an opportunity to
13 continue moving forward with some of the
14 streamlining and permitting streamlining efforts
15 that we've been targeting early on in the CADER
16 effort.

17 As a quick overview of the presentation
18 today I'll be presenting kind of an umbrella of
19 what are we seeing as some of the hurdles in the
20 permit and approval processing considerations.
21 Sort of in a general sense, as far as what's a
22 project.

23 You'll get a quick overview of the type
24 of environmental and siting considerations that go
25 into project review, both by planning and

1 permitting agencies.

2 Two, highlights of this presentation
3 being the CEQA overview and permit process
4 overview of which there will be discussion later
5 on this afternoon. We've already received some
6 comments and hopefully some of them will be raised
7 this morning in this brief presentation, can sort
8 of be food for thought for this afternoon's
9 presentation, as well.

10 And finally, just some ideas about
11 possible streamlining opportunities.

12 What I want to do really quickly is to
13 talk about what we had identified in CADER back in
14 '98 as sort of the current practice of the
15 approval process, both on the planning and
16 permitting agency side.

17 Essentially what's been comments,
18 potentially very time intensive and costly process
19 when certain types of projects are proposed and go
20 through a process that involves community debate;
21 reevaluating the type of conditions that are out
22 there; looking at policies that might not
23 necessarily be consistent with the type of
24 objectives, both from a planning and permitting
25 perspective. And possibly the need to create new

1 types of requirements.

2 Some of the comments that have come up
3 as far as the processing aspects and some of the
4 hurdles include little outside input from the
5 community; not all of the types of approvals that
6 somebody would need to develop a project are
7 easily accessible for a project developer through
8 the current permitting and planning process.

9 From a regulatory perspective, some of
10 the approvals from the different agencies actually
11 compete with each other. And what ends up
12 happening is an iterative process between the
13 developer and the agencies, as well as between the
14 agencies that are involved in the process.

15 I want to focus on the fact that this
16 entire overview of CEQA and the permit process
17 does involve the public at every step. And real
18 quickly, what you have in front of you are nine
19 topics that have generally been identified through
20 a traditional risk communication process.

21 And keeping this in mind, this is
22 basically part of our target audience when we're
23 talking about how to make sure that we can
24 streamline the process for the public and for the
25 people who are developing the projects.

1 Really quickly, industry, regulators,
2 elected officials, activists, employees and
3 retirees, neighbors, concerned citizens, experts
4 such as scientists, and the media.

5 With respect to what I had mentioned
6 earlier about the two types of issues that we're
7 finding as far as the streamlining considerations,
8 focusing on the planning agency side, and that I
9 will address on the CEQA overview, as well as the
10 permitting.

11 Basically from a planning perspective,
12 and this is a very broad generalization, but
13 enough to give you a flavor of what we're looking
14 at, planning agencies will look at a long-term
15 perspective; look at land use issues; look at cost
16 effectiveness within the context of the regional
17 and economic development objectives.

18 And basically while going through the
19 planning agencies' process we'll see that in that
20 process you can basically do that parallel and
21 mutually exclusive from securing the permits.
22 Although there are some overlap and there are some
23 permitting aspects that need to be obtained --
24 permits that need to be obtained prior to going
25 through some of the other approvals on planning

1 agencies sides.

2 From the standpoint of a permitting
3 agency, however, if we were to be able to put
4 those side by side, planning versus permitting, a
5 permitting agency's perspective is fairly short
6 term.

7 We're looking specifically at rules that
8 are focused on a particular environmental
9 discipline possibly. We're looking at a cost
10 effectiveness that looks at a specific agency
11 benchmark, so it's a lot more specific to a
12 discipline versus maybe a possible regional or
13 economic development objective.

14 And we're also looking at permits that
15 again can have them on a parallel track with a
16 planning effort, but not necessarily needing to be
17 integrated.

18 The one common theme that these two
19 agencies do have are the siting and environmental
20 considerations. What I'll be talking about are,
21 really quickly, a couple of the considerations
22 from an environmental standpoint and energy
23 standpoint and social standpoint.

24 And what I mean by that, taking the
25 Energy Commission's criteria for looking at larger

1 power plants, we have roughly about, let's say
2 almost two dozen types of impacts. Air quality
3 we've already touched upon. Other issues such as
4 waste management, land use issues, whether it's
5 the introduction of hazardous materials.

6 With respect to distributed generation
7 and the siting considerations, we're also looking
8 at interconnection which is being addressed in the
9 phase one portion of this effort; as well as going
10 back to the public, where exactly might these
11 units be located.

12 Environmental justice has been an issue.
13 We're looking at issues of public safety and again
14 what we're talking about is essentially a huge --
15 not a huge, but a long list of multiple
16 environmental disciplines that may or may not have
17 to be considered in some types of DG technologies,
18 depending on the type of technology that one is
19 looking to site.

20 From the standpoint of a project
21 developer the four phases of a project, project
22 design, construction, start-up and operation, all
23 of those environmental considerations that were
24 mentioned in the previous slide need to be
25 considered throughout all of the project phases,

1 whether it's through looking at a design that will
2 incorporate mechanisms to minimize the
3 environmental impact, looking at construction that
4 can be in place as a result of having secured the
5 appropriate approvals, and looking at start-up
6 where we're needing to make sure that the type of
7 technology put in does meet the prescribed
8 requirements.

9 And also looking at the operations of
10 the unit, the long-term impacts that we're going
11 to have, because we will have these technologies
12 in our neighborhoods.

13 What that means for somebody in
14 California is we have several counties, several
15 air districts. Fortunately there are counties and
16 cities moving forward with energy plans
17 incorporated in their general plans.

18 We've got permit assistance centers, and
19 we've got -- this is just a kind of a thumbnail of
20 some of the different agencies that are involved.

21 And what that means, again, for somebody
22 from a DG perspective, is we would have to insure
23 that they have sufficient information, because
24 they will be dealing with multiple agencies,
25 federal, state, local, city, county.

1 Cross-cutting issues where there may be
2 a need for an air quality permit which also brings
3 upon the need for something such as a hazardous
4 materials related issue. In fact, there's an
5 additional control that introduces, for example,
6 an ammonia-based control system.

7 Land use and environmental justice
8 issues. Where are these types of technologies
9 located. And probably most importantly that
10 we've heard often is competing lead times.

11 I'm a developer; if I want to submit an
12 application how long it's going to take. Well,
13 I've got multiple agencies to go to. And I've got
14 a review process in each of those agencies that
15 I've got to deal with.

16 A couple of quick examples of the multi-
17 agency cross-cutting issues and competing lead
18 time: Getting an air permit. Do I actually need
19 one? Some of them are exempt. But maybe they're
20 not. Maybe I'm introducing a new hazardous
21 materials.

22 I've got to go to the planning
23 department and public works. Does my project look
24 good. Am I in a compatible zoning -- is my land
25 use and compatibility with zoning consistent. Do

1 I have a noise ordinance that I need to meet.

2 Am I going to have pressure vessels?

3 I've got to go to a state agency. If I have
4 hazardous materials I've got to go to the health
5 department, maybe the fire department. Maybe I've
6 also still got to go back to public works.

7 And finally, depending on the type of
8 technology and the function of it, if, in fact it
9 might be used, for example, at a hospital. Those
10 types of associations, those types of facilities
11 also have their own type of ordinances and
12 guidelines, as well.

13 A lot of questions that come up in the
14 process. What does that mean from the standpoint
15 of streamlining. Can it be streamlined. The next
16 couple of slides that you'll see will deal both
17 with CEQA, CEQA overview. And this is not going
18 to be CEQA-101, because most of you have seen the
19 flow charts associated with CEQA. They work well,
20 but it is a bit of an involved process.

21 I will make sure to focus on some of the
22 two key items that we have brought up in our
23 scoping questions.

24 From the CEQA standpoint, really
25 quickly, for those of you who are not familiar

1 with it, it's the California Environmental Quality
2 Act. And there is a review to insure that the
3 types of activities that have been, if there's a
4 significant environmental impact. If, in fact,
5 there is a broader, more involved evaluation that
6 needs to be done.

7 I want to mention really quickly, I'm
8 throwing the word CEQA out there, and with respect
9 to what's called the planning agency, and then
10 permitting. We'll use air quality as an example.
11 That the terminology in these two arenas can be
12 different.

13 What a project is defined as in CEQA can
14 be different from what a project is defined as in
15 air quality, water quality and some of the other
16 disciplines. That's something to think about when
17 we're talking about streamlining.

18 For CEQA, does an activity qualify as a
19 project. Are we looking at one small microturbine
20 that might be a project. We ask that question, if
21 in fact it fulfills that requirement. Is it
22 exempt. Again, CEQA has some definitions for what
23 would be exempt.

24 If, in fact, it's not, what kind of
25 study needs to be done. What is going to be the

1 result of that initial study.

2 Throughout this evaluation process for
3 CEQA basically this involves going to planning
4 agency; talking to various folks in the planning
5 sector, as well as potentially also having to talk
6 to let's say, using the microturbine as an
7 example, an air district to confirm, at least from
8 the standpoint of a planning aspect, am I going to
9 have to worry about CEQA. But from an air aspect,
10 am I going to have to worry about permitting.

11 What this evaluation process essentially
12 does mean is you need to be prepared and
13 understand what type of timeframe you're looking
14 at.

15 If, in fact, --

16 PRESIDING MEMBER LAURIE: Shirley, let
17 me interrupt and ask a question to seek to clarify
18 a point of confusion for me.

19 When we talk about CEQA projects, we're
20 generally talking about activities which require
21 some kind of discretionary approval from a
22 legislative body.

23 When it comes to distributed generation,
24 under what circumstances would the placement of
25 that facility be deemed an activity independent

1 from the activity that it is designed to serve?

2 So that, let's say you're putting in a
3 microturbine to serve a, oh, a small commercial
4 project, let's say. And the commercial project
5 requires discretionary approval from the local
6 permitting authority.

7 Under what circumstance would the
8 microturbine be deemed an activity independent of
9 that overall project requiring its own CEQA
10 review?

11 MS. RIVERA: I can't answer the question
12 with certainty, but I can say two things. Because
13 from where I've been at is the tail-end of -- I'm
14 the person who's been involved in what happens
15 when that microturbine goes to an existing
16 project, as you had mentioned, a commercial
17 project.

18 My understanding is some of what we're
19 talking about here is what actually is defined as
20 the project. And, if, in fact, that project is
21 tied to that commercial property development.

22 And then along that line some of the
23 aspects we're talking about I'm going to kind of
24 take your question a little bit of a step further.
25 Is that microturbine happening at the same time

1 that the commercial development is happening. And
2 does that constitute a project.

3 Or, in fact, are we looking at something
4 where this development has been there for quite
5 some time, and maybe one of the goals is to phase
6 in certain aspects of the development project to
7 include microturbines.

8 And I think that there's probably other
9 people here who are much more CEQA experts, and
10 understand some of the case law that's been around
11 that type of definition.

12 That's some of the items that need to be
13 considered within the context of CEQA.

14 PRESIDING MEMBER LAURIE: Okay, but if
15 the original commercial project was described as
16 containing a power source being a distributed
17 generation, then that CEQA analysis for that
18 commercial project would include the examination
19 of the impacts of that DG at that time, is that
20 correct?

21 MS. RIVERA: Based on my interpretation
22 of understanding the definition of project, yeah,
23 I would believe that the turbine would be included
24 in the definition of the project, the commercial
25 development.

1 I'm not sure if there's -- if Bob is
2 here.

3 PRESIDING MEMBER LAURIE: Okay, well, we
4 can get into --

5 MS. RIVERA: -- talk about that later.
6 Yeah, --

7 PRESIDING MEMBER LAURIE: We can get
8 into that question later, but the question in my
9 mind is at what point does the placement of a
10 distributed generation facility create the need
11 for an independent CEQA examination.

12 MS. RIVERA: And I'm hoping we'll answer
13 some of those questions this afternoon. I have
14 mentioned very briefly potentially, and Judy had
15 mentioned it's also one of our scoping questions.
16 That would we potentially look at something like a
17 programmatic EIR where you have got some responses
18 from some of the commenters on that.

19 And let me take your example, also. Is
20 there a type of DG project, for example, that
21 could basically qualify for a categorical
22 exemption; maybe some of the PV or other renewable
23 types of technologies could fall under that
24 category, as well.

25 Let's see, you're right, this is pretty

1 sensitive. Environmental impacts reports, really
2 something that I wanted to make sure we put out
3 there so that people were aware of the CEQA
4 process could ultimately, if, in fact, somebody
5 felt this was a larger issue, involve a
6 significant impact.

7 Again, this is a fairly lengthy process.
8 The Energy Commission's siting process for larger
9 power plants is essentially a CEQA-equivalent for
10 those types of units. And is at least around a
11 12-month process, including involving a lot of
12 preparation on the project developer's side.

13 That's a very quick overview of CEQA.
14 From the standpoint of keeping in mind two
15 questions, looking at the possibility of
16 categorical exemptions for certain types of DG
17 technologies, as well as the definition of what
18 kind of projects, as far as distributed generation
19 projects might qualify under having to be reviewed
20 under the CEQA process.

21 As far as the permit process goes, what
22 I'm going to be presenting in the next couple of
23 slides deals with what I call a DG roadmap.

24 And this essentially says, here's maybe
25 what one should do as a result of trying to insure

1 that all the issues are being addressed, and there
2 might be a streamlined process.

3 The way I'm going to present these next
4 couple of slides will deal with what are those
5 things to be aware of, and what happens when folks
6 are not necessarily informed about the process at
7 hand. Again, with the theme following, we've got
8 planning agencies involved and we've got
9 permitting agencies involved.

10 So, a couple of the pitfalls, and real
11 quickly for those that are listening on the
12 internet, what I have here is a roadmap of
13 prepare, execute and communicate.

14 What happens when one -- a couple of
15 things in preparing. Do you know the issues that
16 are going to be involved as far as siting and
17 environmental considerations. Who are the
18 agencies that need to be involved. What
19 regulations are there in place.

20 At this point not everybody feels that,
21 and we've heard comment, that there is a specific
22 guidance document or tool out there for people to
23 use as a resource to go out and insure that they
24 can be prepared to move forward with their
25 distributed generation project efforts.

1 DG item number two, execute. This is
2 essentially getting out there and starting to talk
3 to the agencies that are involved in this process.
4 Scope out the issues, look for the information
5 that you need, what are the forms, how much do I
6 have to pay, how long is it going to take. And
7 also look to see if there has been any other
8 project that has gone through the same planning
9 process and permit approval process.

10 Not just in the area where you want to
11 site, but maybe in areas throughout California,
12 just to see what kind of timeframes and what kind
13 of tools and resources may or may not have been
14 available.

15 Again, some of the issues that we hear
16 are there are no tools for us to understand, you
17 know, in one area. What's involved in making sure
18 that we can have all the necessary information we
19 need to move forward with our project in a timely
20 manner.

21 And finally, one of the themes that I
22 think we've heard, and what we're here for, is to
23 insure that we're able to communicate the projects
24 at hand.

25 We're talking about communication and

1 streamlining the process between agencies, between
2 agencies and the project developers. Who is it
3 that we're talking. The public again will be
4 involved. We're talking to the public. We're
5 talking to regulators. We're talking to people
6 who have a vested interest in the community that
7 they live in.

8 One of the things that we often find,
9 and I think we've heard some of that today, speak
10 in a common language. There's a lot of acronyms
11 in both the planning side and the permitting side
12 and the energy side. And maybe there's some way
13 to look at bringing together these folks, and in
14 particular insuring that when a project is being
15 described to a planning agency, it's also
16 effectively described to a permitting agency and
17 everybody understands what the mutual objective --
18 the mutual goal is as far as meeting the
19 objectives of installing a DG project.

20 And finally, be prepared in the process
21 to negotiate to overcome barriers. One of the
22 issues again with respect to streamlining is just
23 getting the communications going. And this
24 negotiations to overcome barriers is both
25 prevalent in the discussions again between the

1 project developers and the agencies. As well as
2 the agencies that are involved in the approval
3 process.

4 And then, because of the public input
5 and public opportunity portion, there is an
6 opportunity to have the public come in and help
7 you design a project that can get on the ground
8 and get moving. Or you might find yourself in a
9 situation where you'll have to be doing a little
10 bit of damage control.

11 And that's what we're hoping that we can
12 avoid with respect to DG installations. You want
13 to avoid having to delay what are potentially good
14 projects in communicating them to the agencies and
15 the public in a coherent manner.

16 What you're going to see with respect to
17 how do we want to achieve this. Streamlining
18 opportunities. The following are a couple of
19 slides that actually were presented again back in
20 the May 1998 presentation to the CEC regarding
21 CADER's recommendations.

22 On the top we have the current practice
23 again. We have roughly seven steps that say
24 here's the way that things have been processed.
25 Projects have been processed. Where it's a very

1 time intensive and expensive effort.

2 And what we have that we had proposed on
3 the CADER effort and what we're moving forward
4 here in this proceeding is a streamlined approach.

5 It's a little bit hard to communicate to
6 those who might be listening on the internet, but
7 basically the idea is to scope out all the issues
8 up front and develop the types of policies and
9 standards that would allow DG projects to come to
10 fruition by minimizing the amount of time and
11 expense that would normally be involved in the
12 current process we have.

13 Again, these might include certain tools
14 or resources that agencies can use, that agencies
15 can share among themselves, as well as that
16 agencies can share with project developers.

17 Finally, some of the types of
18 recommendations we have had in May of '98 that are
19 still important at this time. Streamlining the
20 process, what does that mean, for both CEQA and
21 the permit process.

22 Let's have some certainty. Develop
23 guidelines and an infrastructure. Have the
24 agencies collaborate with each other. Possibly
25 look at a template permit and a program approval

1 setting. Let's have a standard process that the
2 agencies can use to review and approve projects.
3 And maybe look at putting out there what are the
4 types of compliance requirements that are
5 necessary so that there's certainty from the
6 standpoint of the developer what they will need to
7 meet in order to have that particular technology
8 in our neighborhood.

9 Look at a central permit effort. This
10 is one of the ideas that had come out again back
11 in 1998, is to look at a prescribed review time.
12 Maybe 30 days for review, and 60 days for
13 approval. So basically looking at an expedited
14 permit process in the different agencies sectors.

15 Possibly is there an opportunity for a
16 one-stop permitting. To look at all the
17 multimedia issues at one time, multimedia being
18 the different environmental disciplines.

19 And then finally, let's look at some of
20 the court issues actually involve the need to look
21 for consistent legislation or regulations and
22 policies that wouldn't compete with each other up
23 front.

24 And that's pretty much my presentation
25 of the CEQA permit process overview. Are there

1 any questions?

2 PRESIDING MEMBER LAURIE: Questions
3 regarding Ms. Rivera's presentation at this point?
4 Ms. Smith, if you can come to the microphone,
5 please.

6 MS. SMITH: Eileen Smith with the Solar
7 Development Cooperative.

8 I was wondering if you could tell us a
9 little bit about your history in the energy
10 industry, Shirley?

11 MS. RIVERA: I'm sorry?

12 MS. SMITH: Your history in the energy
13 industry?

14 MS. RIVERA: With respect to the CEQA --

15 MS. SMITH: Your profession.

16 MS. RIVERA: -- permit process?

17 MS. SMITH: Yes, overall.

18 MS. RIVERA: Well, why don't I do this,
19 I don't know if this is going to bore people.
20 I've been in the environmental field for 13 years.
21 I had started out in the USEPA Region 9,
22 Environmental Protection Agency, doing permitting
23 for projects that were located in areas that meets
24 ambient air quality standards.

25 Subsequent to that I was involved, I

1 worked for consulting, organizations that dealt
2 with assisting industries to comply with the air
3 quality environmental requirements.

4 Subsequent to that I worked with --

5 MS. SMITH: What organizations were
6 those?

7 MS. RIVERA: I'm sorry?

8 MS. SMITH: What -- well, you worked for
9 yourself doing that?

10 MS. RIVERA: No, --

11 MS. SMITH: The utility --

12 MS. RIVERA: Sierra Research in
13 Sacramento, California, as well as Environmental
14 Resource Management in Los Angeles, California.
15 And subsequent to that I spent three years in San
16 Diego Gas and Electric's environmental department.
17 And subsequent to that I had been on my own for
18 six years as a consultant working on multiple
19 issues ranging from small power projects to larger
20 power projects, as well as some policy issues
21 dealing with air quality and energy projects.

22 MS. SMITH: Okay. And in that process
23 what's the general consensus that you've seen
24 about the pollution that's in the air around us?

25 MS. RIVERA: I'm not clear what your

1 question is with respect to that, other than
2 primarily because I work in air quality there
3 continue to be permitting programs that look to
4 maintain the clean air standards where there are
5 clean air, and that there are programs that look
6 to reduce emissions in areas where they are not
7 attaining the program.

8 The consensus is essentially from this
9 perspective of the regulators, there is a problem
10 and they're moving toward that. And from the
11 standpoint of my involvement, we look to develop
12 projects that will meet those requirements, if
13 not, you know, make them better and further reduce
14 emissions.

15 MS. SMITH: Is there any connection to
16 like illnesses and that sort of thing? Have there
17 been any studies -- I know there was one study
18 that was recently done by I think Senator or
19 Representative Waxman --

20 MS. RIVERA: I can't speak specifically
21 to the studies, particularly the one that you're
22 talking about. But there have been several
23 studies that have been put out there. Primarily
24 that is what our standards are based on. Health
25 studies.

1 And so there are numerous studies at
2 this point that do provide that kind of
3 information for the public.

4 MS. SMITH: What would be the best
5 resource if we wanted to find out more about that?

6 MS. RIVERA: There's several resources,
7 in fact. You might -- you will be hearing from
8 somebody from the California Air Resources Board,
9 and they have a lot of public information specific
10 to air quality impacts and health impacts on the
11 public. And they're here in Sacramento.

12 There's a lot of information on the
13 internet. And there are also several educational
14 institutions and trade organizations that provide
15 that type of information, as well.

16 MS. SMITH: So, --

17 MS. RIVERA: EPA, federal government, a
18 lot of agencies that are involved in --

19 MS. SMITH: What would you suggest to
20 small businesses that are involved in energy --

21 MS. RIVERA: Basically I guess the list
22 that I just provided. I think that part of what
23 we're doing here today is to insure that that kind
24 of information that you're asking for is
25 accessible. And it's a big list of stuff. Just

1 by saying going to the internet probably doesn't
2 help everybody. But maybe through this process,
3 and maybe through some -- it sounds like you might
4 have some interest in, we might be able to try to
5 pool a list of resources to help small businesses.

6 MS. SMITH: That would be great.

7 MS. RIVERA: Yeah.

8 MS. SMITH: Thanks.

9 MS. RIVERA: You're welcome. Thank you.
10 Are there any other questions?

11 COMMISSIONER PERNELL: I have one. Just
12 as a way of clarification here. We're not trying
13 to streamline CEQA's regulations, we are trying to
14 provide information that will possibly help
15 streamline the process as it relates to working
16 with the community, as well as agencies, in
17 defining your project up front.

18 And so, in terms of the previous
19 speaker, we're not trying to, in any way, not look
20 at all of the health risks as it relates to the
21 communities and folks that are around these
22 various projects. But to put all of those issues
23 up front, and hopefully in doing so, it will
24 alleviate some of the questions in going back to
25 agencies, re-filling-out forms.

1 At least that's my understanding of what
2 we're trying to do here today.

3 MS. RIVERA: Yes, that's --

4 COMMISSIONER PERNELL: That's more of a
5 comment than a question, but -- and in that
6 process, I guess the question is, is there -- do
7 we intend to put together maybe a best practice
8 list as it relates to licensing these various
9 distributed generation projects?

10 MS. RIVERA: Is that directed --

11 COMMISSIONER PERNELL: That's a
12 question, yes.

13 MS. RIVERA: For me?

14 COMMISSIONER PERNELL: Yes.

15 MS. RIVERA: Okay, well, I believe the
16 intent is to provide at least the tools and
17 resources. And if one of those comes out through
18 the scoping efforts that we have today to provide
19 a best practice list for licensing, then I think
20 you've actually, by providing that comment, that's
21 going to be probably one thing that we have to see
22 would develop through this process.

23 I can't particularly speak for the
24 Energy Commission, and I'd have to look to Judy
25 Grau for that. But that's one of the things that

1 we've heard from the agencies. We've already
2 received comments.

3 And then we've also -- probably hear
4 some this afternoon, or actually just this morning
5 from some of the folks that will tell us a little
6 bit about their development projects and what
7 their experiences have been with the agencies.

8 COMMISSIONER PERNELL: Thank you.

9 MS. RIVERA: You're welcome.

10 PRESIDING MEMBER LAURIE: Ms. Rivera,
11 question. Do you consider a 500 megawatt power
12 plant to be a land use?

13 MS. RIVERA: To be a land use --

14 PRESIDING MEMBER LAURIE: Yes.

15 MS. RIVERA: -- issue? Yes. I mean
16 from the standpoint of the footprint, and its
17 impacts, yes.

18 PRESIDING MEMBER LAURIE: When you
19 create a million square foot commercial shopping
20 center that results in a commercial land use,
21 correct?

22 MS. RIVERA: Correct.

23 PRESIDING MEMBER LAURIE: When you
24 construct a 500 megawatt power plant are you
25 creating a designated land use?

1 MS. RIVERA: I don't have the expertise
2 to respond to that.

3 PRESIDING MEMBER LAURIE: Okay, well,
4 I'm not trying to trick you. What I'm trying to
5 get to is at what point does the operation of a
6 piece of distributed generation equipment become a
7 land use, as opposed to an operational element of
8 a underlying use of that land? And at what point
9 does it thus create a land use issue?

10 Also, and I hope we're going to address
11 it today, is I do not know, and I'm very
12 interested in knowing, at what point does a
13 distributed generation activity require a
14 discretionary approval of a local agency, thus
15 causing a CEQA inquiry. And I don't know the
16 answer to that, and I'm interested in knowing the
17 answer.

18 MS. RIVERA: Would you like my opinion?

19 PRESIDING MEMBER LAURIE: And perhaps we
20 can address that sometime during the course of the
21 day if you're not prepared to do so.

22 MS. RIVERA: I'll answer the first
23 couple of questions that you had at this point.
24 The question about when does a DG project
25 potentially be a land use issue versus an

1 operational element, and basically it depends.
2 We're talking about a family in a portfolio of DG
3 technologies, and depending on what we're looking
4 at as an existing, let's say, region's
5 infrastructure and a general plan, there may be
6 zoning issues. There may be other types of issues
7 also depending on the visual and aesthetics.

8 If we're talking about a fossil fuel
9 fired technology that might involve the stack
10 height. There might be issues associated with
11 site selection that a developer may not have
12 considered, which, in fact, that developer may
13 introduce a land use issue to begin with.

14 From the standpoint of an operational
15 element, again a lot of this is going to be
16 dependent on the particular state and potentially
17 really local requirements in a given area. And if
18 the technology triggers the type of threshold.

19 Most familiar with, from the standpoint
20 of an air quality perspective, for example, do we
21 have a land use issue with microturbines. Well,
22 it depends on where it's located, what its
23 function is. But from the standpoint of an air
24 quality issue, in the South Coast area, I believe,
25 there's a threshold that's relatively low, 2.975

1 million Btu per hour. It becomes an issue in that
2 venue with respect to an air quality issue.

3 Land use, again depends on the site
4 selection.

5 I can't answer the question that you
6 pose regarding discretionary permitting. I would
7 like to leave that to the experts in the afternoon
8 to discuss that.

9 Again, we've received some comments from
10 at least some of the air agencies that have
11 addressed concerns about either single individual
12 units that are DG technologies that contribute
13 potentially in an adverse way to the environment.
14 And to some extent there's also concern about
15 multiple units that are sited, like the cumulative
16 effects. Judy mentioned that in her last
17 presentation as one of the concerns that have been
18 raised from an air quality standpoint.

19 That wouldn't necessarily be a land use
20 issue, but in fact it might be raised as one, if,
21 in fact, somebody found say the sprinkling of such
22 technologies throughout a region to be an issue.
23 It could be raised through some of the planning
24 venues.

25 PRESIDING MEMBER LAURIE: Thank you very

1 much.

2 MS. RIVERA: You're welcome.

3 PRESIDING MEMBER LAURIE: Any more
4 questions? Excuse me, Mr. Alvarez, please go
5 first. Ms. Smith --

6 MS. SMITH: I don't have a question. I
7 just want to make an answer to your question there
8 on zoning and land permit.

9 I don't know the air quality issues, but
10 I do know that zoning for very small,
11 insignificant DG systems, it's very dependent upon
12 the local design standards, even in a specific
13 building development.

14 So they're often considered as
15 appliances, but legally there's a variety of
16 approval processes that you have to go through
17 from an individual homeowner up to a large
18 development.

19 PRESIDING MEMBER LAURIE: Thank you.
20 Mr. Alvarez.

21 MR. ALVAREZ: Manuel Alvarez, Southern
22 California Edison.

23 Ms. Rivera, on your chart where you have
24 the streamlining, the current process. I think
25 it's, at least on the handout it's 22.

1 MS. RIVERA: Okay.

2 MR. ALVAREZ: You have a series of boxes
3 and steps in the process --

4 MS. RIVERA: Yes.

5 MR. ALVAREZ: -- that's laid out there.
6 And I guess, as I was looking at the boxes, they
7 were all the same, so --

8 MS. RIVERA: Yeah.

9 MR. ALVAREZ: -- consistent -- I guess
10 that's consistent with Commissioner Pernell about
11 we're not here to deal with the underlying
12 requirements of CEQA.

13 So I guess my question is how do you see
14 the change in sequence affecting the streamlining,
15 and what do you think is happening by moving those
16 boxes around?

17 MS. RIVERA: Okay. What Mr. Alvarez is
18 referring to in the streamline of current process
19 that we have essentially seven boxes, as he's
20 observed. They are all the same types of steps.

21 We're saying that the current steps may
22 not actually be the most efficient way to seek a
23 streamlined process for DG approval.

24 And the way we see it is by taking a lot
25 of discussion up front by getting the community

1 issues up front, first step in this streamlined
2 process that the community needs, compared to DG
3 project approval.

4 Somebody goes in and wants to get their
5 project approved in the old way, they go in and
6 there's a perception that maybe not everybody has
7 all the information they need.

8 In the streamlined approach we're really
9 looking at initiating that discussion at the very
10 beginning. So by reshuffling the steps that are
11 involved, if you look at the first four steps
12 we're really talking about an evaluation process
13 with the parties that are involved.

14 If you can go back and refer to, for
15 example, the nine publics that are involved, the
16 community needs debate; options, evaluation and
17 consensus building; amend policies to allow DG;
18 and create standards to review projects. Those
19 are the first four steps in the streamline
20 approach.

21 The last three steps that we have are DG
22 project approval; apply the policies of standards
23 to proposed projects, and then the decision. What
24 we've done essentially between the current
25 practice and the streamline approach is to create

1 the infrastructure up front and hope to bring the
2 tools and resources to all of the involved parties
3 so that they can scope out the different issues,
4 look at the different barriers, have a discussion
5 up front, know the dialogue that has happened to
6 get us to a point where a DG project can basically
7 just go on, look for approval, fill out the
8 appropriate forms, know the steps that they've
9 gone through. And basically hopefully have the
10 unit on line in a much shorter timeframe with a
11 less iterative process.

12 That answer your question?

13 PRESIDING MEMBER LAURIE: Thank you very
14 much.

15 We have one more question, yes, sir.

16 MR. NAZEMI: Thank you. My name is
17 Mohsen Nazemi; I'm Assistant Deputy Executive
18 Officer in South Coast Air Quality Management
19 District.

20 I guess I just want to address the issue
21 that you raised about when does the project become
22 a project, and what do permitting agencies look at
23 from DG standpoint.

24 And I guess it really relies on the
25 discretionary decision that a permitting agency

1 has to make. And under the laws of the State of
2 California we have to make sure CEQA is satisfied
3 before that discretionary decision is made.

4 It goes back to whether the project
5 being permitted for an engine or the whole project
6 has undergone CEQA and adequately addressed the
7 environmental impacts.

8 So if it's a brand new development that
9 they're putting in, and they're putting in a
10 micro-cogen or whatever type of DG as part of that
11 development, then all the permitting agency
12 requires is if there's a CEQA document that has
13 been already prepared and approved and then
14 certified for that project.

15 If, however, it's a project that does
16 not have that as part of the initial development,
17 then we would require the agency with the primary
18 permitting authority to give clearance whether
19 they require any additional CEQA document or not.

20 Most of the time this is the cities or
21 the counties. And I'll give you an example. When
22 we had all the refineries in South Coast go to
23 reformulation of phase I and phase II federal and
24 state, the cities and counties basically did not
25 require any CEQA documents because it was within

1 their conditional use permit authority that
2 they've already granted to the refineries. And
3 there was no change in the land use, per se.

4 So, we, by default, because we had
5 discretion over permitting of all the refineries,
6 became the lead agency. And so we had to go
7 through the CEQA process and satisfy it.

8 So it depends on whether their are
9 existing conditional use permit covers the
10 activity that the project proponent is proposing.
11 And if it does, then still doesn't close the loop.
12 It becomes the responsibility of the discretionary
13 permitting agency to decide whether they need to
14 do anything extra.

15 PRESIDING MEMBER LAURIE: Thank you,
16 sir. That's very helpful.

17 Any other questions, comments at this
18 point? Thank you, Ms. Rivera.

19 MS. RIVERA: Thank you.

20 MS. GRAU: Our next speaker is Jeff
21 Wilson with the Air Resources Board Staff.

22 PRESIDING MEMBER LAURIE: And, Judy,
23 just quickly, it's my understanding that we do
24 have to reconvene after lunch at exactly 1:00,
25 because there's certain time constraints?

1 MS. GRAU: There is a speaker who would
2 like to speak as close to 1:00 as possible, but
3 she can remain until she's done. She just can't
4 get here before 1:00.

5 PRESIDING MEMBER LAURIE: Okay, fine.
6 Thank you.

7 MR. WILSON: Thank you. Good morning.

8 I'll give you a brief overview of the
9 presentation. We'll be looking at potential air
10 quality issues. We've made some preliminary
11 estimates. These are based on the DUA study that
12 ARB has contracted.

13 And then we'll look at the next steps
14 that ARB will be taking with regard to DG. And
15 then I'd like to summarize the overview -- or
16 excuse me, summarize the presentation.

17 PRESIDING MEMBER LAURIE: Mr. Wilson, we
18 do have a problem with that microphone. It's
19 really somewhat directionalized, so you have to
20 get as close to it as possible.

21 MR. WILSON: Okay, yes.

22 PRESIDING MEMBER LAURIE: Thank you.

23 MR. WILSON: Potential air quality
24 issues include the impact that DG will have on the
25 annual emissions inventory. The impact will

1 depend on the type of DG units which are deployed
2 and how many there are.

3 For example, fuel cells will have
4 relatively little emissions, whereas diesel gen
5 sets could have potential for significant air
6 quality impacts.

7 Deployment of DG by definition will
8 change the population's exposure to harmful
9 pollutants. DG which is located close to the end
10 user will represent a different pollution exposure
11 pattern than a central station power plant that is
12 distant from population centers.

13 Diesel-powered DGs pose a particular
14 concern, since diesel particulate matter has been
15 identified as a toxic air contaminant.

16 Another issue is peak shaving on hot
17 summer days. This represents a collision of
18 competing needs. On hot summer days we need
19 electricity, but we also have a need for clean
20 air. The hottest summer days when we most rely on
21 the air conditioners represent the highest
22 electricity demand of the year. Additional power
23 generation to meet this demand creates additional
24 pollution.

25 And unfortunately, as a result of these

1 high temperatures and ambient pollution, these are
2 the very days that we will often suffer our worst
3 ozone episodes and most need to reduce emissions.

4 Another issue is operating emergency
5 standby or exempt gen sets to supply electrical
6 power to the grid could result in adverse air
7 quality impacts. For the most part these diesels
8 have little emission controls.

9 Preliminary estimates of DG penetration
10 and the associated emissions will shed some light
11 on the first of these previously listed air
12 quality issues, that is the impact, the annual
13 emissions inventory.

14 ARB has funded a DG study by Distributed
15 Utilities Associate, or DUA. The DUA study uses
16 economics as the driver. That is it assumes that
17 a specific technology will only be deployed if it
18 is cost effective.

19 It evaluates the economics from both the
20 utility and the large industrial customers'
21 perspective for the years 2002 and 2010.

22 On the utility side, it looks at both
23 peak and baseload applications. And on the
24 customer side it looks at a range of utility
25 electricity rates.

1 The study looks at the viability of
2 diesel spark, dual-fueled engines, conventional
3 combustion turbines, microturbines and advanced
4 turbine systems. And finally, both phosphoric
5 acid and proton exchange membrane fuel cells.

6 Based on the cost effective penetration
7 of various technologies and the technology-
8 specific emission factors, annual emission
9 estimates were made for eight California air
10 districts. Six pollutants were studied, NOx, SOx,
11 CO, CO2, PM and VOCs. This presentation will only
12 cover a small portion of the DUA estimates.

13 The market potential estimates are based
14 on new load growth within California. This study
15 assumes that DG will not displace existing power
16 generation, but only penetrate new growth markets.

17
18 Between the present year and 2010 this
19 growth is forecasted to be approximately 1
20 gigawatt per year, or 2 percent of peak load per
21 year. The market share of each technology is
22 estimated, based on the cost effectiveness of that
23 technology versus the cost effectiveness of
24 central station power plants.

25 The different DG technologies do not

1 compete against each other in this study, but the
2 estimation of each technology stands on its own.
3 Also the potential market shares are based on
4 limited economic parameters. There may be other
5 factors that will influence the eventual market
6 outcome such as standby charges, exit fees, or
7 future PUC rulings.

8 As you can see in the slide, of the load
9 growth in the year 2002, estimated to be 976
10 megawatts. A substantial portion of that is a
11 viable market for peak DG technology.

12 Diesels have an economic potential to
13 capture over 75 percent of the new load growth
14 market as a peak technology. Advanced turbine
15 systems and spark engines are also able to capture
16 over 50 percent of the market from central station
17 generation.

18 I'd like to point out that these are
19 draft, and they're also from an earlier version of
20 the draft study. I received a more recent version
21 and the numbers have changed just slightly, but
22 the conclusions are relatively unchanged.

23 On the other hand, base DG technologies
24 do not fare as well. They simply are not as
25 economical as central stations. Only ATS is

1 viable as a base technology.

2 The market difference between baseload
3 and peak is reasonable if you consider that
4 utility peak was chosen as 200 hours per year.
5 The least capital outlay to meet that short period
6 would be the most cost effective. Building a
7 central station to meet peak capacity demands
8 would be much more capital intensive than
9 installing a relatively inexpensive DG unit.

10 The fuel costs, on the other hand,
11 create a reverse dynamic. For the short duration
12 of peak demand higher fuel costs for DG can be
13 absorbed; however, fuel costs become critical in
14 baseload applications where the generation
15 technology may be operating year round.

16 If DG fuels, diesel and natural gas, are
17 more expensive than electricity, then the use of
18 DG in utility baseload applications will have
19 limited market potential.

20 I would like to just, at the beginning,
21 point out there is a typo on this particular one.
22 If you note that the PM for otto/spark engine is
23 listed as 256, that's off by a factor of 10, it
24 should be 25, 26. As I say, these numbers have
25 changed slightly.

1 The emissions due to the deployment of
2 DG are a product of the degree to which a
3 technology is deployed and the amount of emissions
4 produced per unit of energy for that technology.

5 The first row labeled system only is a
6 reference point. That is all growth consists of
7 the current mix of central station technologies.

8 Under this scenario NOx emissions would
9 increase 13 tons in the year 2002. PM would go up
10 11 tons, and CO2 would increase 20,000 tons.

11 In the next row, microturbines are shown
12 to capture 28.7 percent of the market, the
13 remainder made up of central station generation.

14 Under this scenario NOx increases 44
15 tons for the year. PM increases -- is the same as
16 100 percent central station scenario. And the CO
17 increases by 50,000 tons.

18 Scanning down the NOx column we can see
19 that the emission increases are substantial for
20 the last technology listed, diesel engines.
21 Diesels are estimate to be cost effective
22 technology for over 75 percent of the new load
23 growth when used in peak applications.

24 Unfortunately, they are much dirtier on
25 a per-unit of energy produced basis than the other

1 technologies. Not only would diesels cause a
2 greater increase in PM and CO2 than most of the
3 other technologies, but diesel PM has been
4 determined to be a toxic air contaminant.

5 In this chart we can see baseload
6 operation accounts for significantly more
7 emissions than peak operation. In the systems
8 only scenario, NOx, PM, CO2 increases by 315 --
9 yes, okay, if we just have central station
10 generation then the emissions increase due to the
11 load growth for that particular year is an
12 increase of 315 tons, 267 tons and 489,000 tons
13 per year respectively.

14 However, as seen in the portion of
15 growth column, the only technology that captures a
16 significant portion of the market is the advanced
17 turbine system, ATS.

18 The estimated ATS penetration would
19 cause a greater increase in NOx and CO2 than the
20 system only, but would cause a lesser increase in
21 PM than the systems only scenario.

22 Looking down the portion of growth
23 column we see that dual fueled engines and the
24 fuel cell are almost never cost effective.
25 Therefore, the NOx emissions listed as 315 tons,

1 for example, are entirely due to central station
2 generation.

3 In this next slide -- we've been looking
4 at the utility perspective, and now we're going to
5 be looking at the economic analysis from the
6 customer perspective.

7 Using different utility rate structures
8 to determine the benefit-to-cost ratios and the
9 economic run hours, utility rates span a range
10 with the lowest rates in northern California, and
11 the highest rates in San Diego to the south.

12 In this slide we see the estimates for
13 the low rate scenario. Looking at the column
14 displaying the benefit-to-cost ratio, the B/C
15 ratio, we see that all the technologies are less
16 than 1.

17 A B/C ratio of 1 would indicate a break-
18 even point, with a B/C ration greater than 1
19 indicating net financial benefit, and less than 1
20 indicating a net financial cost. Thus, none of
21 the DG technologies can compete with central
22 station generation in the low rate scenario.

23 However, for existing DG, operation may
24 be cost effective for a portion of the year. This
25 is displayed in the column indicating portion of

1 energy from DG. The associated emissions are
2 shown, as well.

3 However, the emissions shown are not
4 likely to occur since the low benefit-to-cost
5 ratio indicates that DG would not likely be built
6 in this particular ratecase.

7 The situation is quite different,
8 however, under the high rate scenario. Looking at
9 the benefit-to-cost ratio, most of the
10 technologies are cost effective; that is the
11 benefit-to-cost is greater than 1, with diesels
12 breaking even and only fuel cells not able to
13 compete against central station.

14 CHP, that is combined heat/power or
15 cogeneration, adds to the viability of DG. In
16 particular, microturbines with CHP and ATS with
17 CHP are particularly cost effective. They are
18 able to run economically throughout the year
19 providing 100 percent of the customers' energy
20 needs.

21 The NOx emissions estimates illustrate
22 how the emissions impact is so strongly influenced
23 by the type of technology used. Although the
24 customer would find it economical to derive only
25 about one-fourth of their power from diesel DG, it

1 would cause by far the greatest increase in NOx
2 emissions of any of the DG technologies.

3 To summarize, the DUA emissions
4 estimates, excluding internal combustion engines,
5 in general the picture is mixed. NOx emissions
6 increase, PM goes down relative to central
7 station, CO2 goes down with added CHP.

8 The picture is not mixed, however, when
9 speaking of internal combustion engines. All the
10 emissions go up. Diesels, in particular, would
11 cause a large relative increase in both NOx and
12 PM. DG is estimated to be cost effective for
13 utility peak applications and for large industrial
14 customers in high electricity rate areas of
15 California.

16 To summarize, the next step for ARB will
17 be to continue to investigate potential impacts of
18 DG, and further refine our emissions estimates.
19 Not just for peak applications, but also emissions
20 estimates on peak demand days.

21 We need to look at changing exposure
22 patterns, also the smaller industrial and
23 commercial customers throughout California share a
24 rate structure more similar to the high rate case
25 for the large industrial customers. Actually, I

1 think that should be low rate case -- pardon me,
2 high rate case.

3 We need to look at DG's viability in
4 these other markets, that is residential,
5 commercial and small industrial.

6 The ARB will also need to consult with
7 the local air districts that have primary
8 authority to regulate air emissions from DG. In
9 particular, we would like to consult with
10 districts regarding emergency standby and exempt
11 units.

12 Finally, as DUA estimates show there is
13 an economic potential for the deployment of DG.
14 However, there is great uncertainty as to whether
15 DG will actually be deployed in substantial
16 numbers, especially given, you know, the PUC
17 proceedings that are taking place right now.

18 That concludes my talk. Any questions?
19 Um-hum.

20 PRESIDING MEMBER LAURIE: Let's take the
21 gentleman in the back row.

22 MR. WILSON: Oh, pardon me. Winston
23 Potts has something to say regarding -- also from
24 the ARB -- something to say regarding particulate
25 matter.

1 MR. POTTS: Stay here or --

2 PRESIDING MEMBER LAURIE: Whatever you
3 desire, sir.

4 MR. POTTS: Winston Potts from the Air
5 Resources Board. I just wanted to comment briefly
6 on the efforts that we have going on at the agency
7 right now with regard to PM and diesel exhaust.

8 As Jeff pointed out, diesel exhaust PM
9 has been identified as a toxic air contaminant
10 with possible carcinogenic effects on people.

11 And right now we have an effort going on
12 called a regulatory diesel needs assessment, in
13 regards to assessing the need for regulations in
14 that area from those types of sources.

15 A couple of things that we are looking
16 at, a couple of different areas we're looking at
17 is existing stationary diesel engines and also
18 putting out permitting guidelines for new
19 stationary diesel engines.

20 We have a lot of information on our
21 website in this ongoing effort. The documents
22 that we have put out are all draft documents. And
23 if you're interested in this effort, you can go to
24 our website, www.arb.ca.gov.

25 As far as the draft permitting

1 guidelines for stationary engines, we are
2 proposing PM emissions of .1 gram/brake horsepower
3 hour for new engines. We also have an effort
4 going on with existing engines, assessing -- doing
5 a technology evaluation for the different types of
6 control technologies, to control PM.

7 And finally, we anticipate regulatory
8 actions probably in the next two to three years to
9 address this issue.

10 Myself, I'm also working on a best
11 available retrofit control technology and
12 reasonably available control technology document
13 for existing stationary engines. And will be
14 addressing both NOx and PM in the diesel part of
15 that document.

16 So, I just wanted to emphasize that
17 diesel PM is an issue that we are addressing. And
18 that there will be some regulatory procedures
19 coming up in the next two to three years.

20 PRESIDING MEMBER LAURIE: Thank you,
21 sir, very much. Questions of ARB?

22 Commissioner Pernell.

23 COMMISSIONER PERNELL: This is maybe a
24 clarification question for me.

25 MR. WILSON: Yes.

1 COMMISSIONER PERNELL: And that is you
2 indicated that diesel is about 75 percent of the
3 anticipated load growth?

4 MR. WILSON: Correct.

5 COMMISSIONER PERNELL: And also we know
6 that diesel emits a lot of contaminants in terms
7 of air quality. And that ARB is doing some I
8 guess rulemaking in this area which will be coming
9 out in the next two or three years.

10 And I guess my question is that your
11 slide says over the next two years that we
12 anticipate a 75 percent growth in diesel, for
13 stationary diesel for distributed generation.

14 And how does that fit with your
15 rulemaking in terms of trying to get some handle
16 on the air quality issue centered around diesel?

17 MR. WILSON: Thank you, that's a good
18 question. Let me clarify.

19 This study looks at potential based on
20 economics. It does not look at other issues that
21 might come into play, permitting for example. The
22 hurdles that they may have to go through in
23 district permitting.

24 So, it is strictly based on very limited
25 parameters. The idea was the study was to give us

1 an initial idea of the market potential for the
2 different technologies so that we could determine
3 if we do have a potential problem.

4 So, these potentials really are not
5 necessarily going to be realized. It's strictly
6 economic. It's not taking into consideration
7 permits that may be required.

8 And we also have Joe Ianuchi from DUA
9 here, so if I'm missing some points, I would ask
10 him to clarify any additional points.

11 COMMISSIONER PERNELL: Okay, I guess my
12 concern here is that we know that there might be a
13 potential for growth in the diesel area. And
14 evidently there's some action being taken by ARB.

15 MR. WILSON: Yes.

16 COMMISSIONER PERNELL: It's just that
17 unless it's a local issue there's no way we can
18 either slow the action down or increase
19 regulations as it relates to diesel within the
20 next couple of years.

21 So, it doesn't sound like that's a
22 possibility. Although we're very concerned about
23 air quality as it relates to the present diesel
24 generators.

25 MR. WILSON: Well, as I say, the study

1 is to gather information; and ARB management is
2 looking at this. I --

3 COMMISSIONER PERNELL: Yeah, you can't
4 answer -- I'm not trying --

5 MR. WILSON: Yeah.

6 COMMISSIONER PERNELL: -- to put you on
7 the spot here.

8 MR. WILSON: Indeed, I --

9 COMMISSIONER PERNELL: It's just a
10 concern that when I see the growth pattern in
11 stationary engines would be diesel, and then on
12 the other hand there's some concern about the air
13 quality as related to diesel, so.

14 MR. WILSON: Well, we in ARB are also
15 concerned with that. That's why we're
16 highlighting this issue.

17 COMMISSIONER PERNELL: Thank you.

18 PRESIDING MEMBER LAURIE: Point very
19 well raised, Commissioner.

20 Let's go ahead and take questions on
21 this side of the room, then we'll move over here.
22 Yes, sir.

23 MR. GREENBERG: Steven Greenberg with
24 Intergy Power. I just would want -- you don't
25 have to respond, Jeff -- a clarification on the

1 costs based on the high and low analysis. Are
2 these compared against selling the power as
3 wholesale energy or retail, because those numbers,
4 based on my economics, don't match.

5 Against a retail all of these would have
6 a B-to-C of 1 or higher.

7 I'm referring to the bill analysis
8 graphs that showed lower than 1 benefit-to-cost
9 ratio.

10 MR. WILSON: Okay. A distinction here
11 is that this is a bill analysis from the customer
12 perspective, so these are not just rates, but
13 include everything that goes into the bill that
14 the customer receives.

15 So, it is from a retail perspective, is
16 my understanding.

17 MR. WONG: My name is Eric Wong with the
18 Electric Power Group of Caterpillar.

19 Both Caterpillar and Solar Turbine sat
20 on the advisory committee for this particular
21 study. I want to address Commissioner Pernell's
22 question. It's an excellent question, and, Jeff,
23 if you can stay at the mike then we can perhaps
24 have a little bit of a dialogue.

25 Our perspective is that diesel is not

1 going to be occupying the economic potential that
2 was described in the study. As we see it, if
3 diesel is going to operate at above emission
4 limits, at its permitted emission limits -- and,
5 Jeff, please correct me on this -- that's going to
6 invoke retrofit control technology.

7 And that's going to drive the cost of
8 those units to be uneconomic. So, those units
9 will operate, those existing units will operate
10 within a current permitted limits. But if you
11 want to operate them for more hours per year,
12 because of their cost, cost of those units, if you
13 add on the cost of retrofit control technology,
14 that's going to drive the costs up. It's not
15 going to make sense to operate them.

16 So, normally I believe the limit is, at
17 least in the South Coast Air Basin, is about 200
18 hours per year. It doesn't get much higher than
19 that. We don't see, and I can probably speak for
20 about five American manufacturers that produce
21 diesel and gas engines, we don't see California as
22 a place where we will sell diesel engines except
23 on emergency standby basis only.

24 We're very heavily focused on gas
25 engines, and that was addressed by the study. Gas

1 engines can be installed brand new with retrofit
2 control technology. Again, the point that Steven
3 Greenberg brought up about the market price. That
4 will determine the economics of whether it's
5 beneficial from a B/C cost ratio perspective to
6 install a gas-fired system.

7 COMMISSIONER PERNELL: Are you talking
8 about petroleum or natural gas?

9 MR. WONG: Natural gas fired.

10 I guess the other point I want to bring
11 up on this study, Jeff, you have the phrase here
12 on these charts that says system only.

13 MR. WILSON: Yes.

14 MR. WONG: And my understanding, sitting
15 on the advisory committee, if this system was
16 frozen in time as of, is it 1998, with the current
17 mix of existing resources, as of 1998, which
18 includes nuclear and hydro and the system only gas
19 fired, natural gas fired power plants. And that
20 was expanded over time in those same proportions,
21 is that correct?

22 MR. WILSON: Yes, that's correct.

23 MR. WONG: Okay, so you have to
24 understand that. I mean the system only
25 definition here does not include the power plants

1 that are currently before the Commission. That
2 percentage increase is not put back upon that 1998
3 system, existing system. That system is frozen.
4 And to meet the 976 megawatt load increase, that
5 system, frozen in time, was expanded in the same
6 proportions. You saw nuclear expanding, you saw
7 hydroelectric expanding, as well as all the other
8 resources expanding over time.

9 So you have to put that into context in
10 how those numbers play out here. And, rather than
11 get into an extensive discussion, I believe there
12 are Energy Commission Staff who did sit on the
13 advisory committee that can brief the
14 Commissioners on that, some of the assumptions
15 that were made in the study.

16 Thank you.

17 MR. WILSON: Okay, to address the
18 baseline issue, that system only issue. It turns
19 out that with the most recent Energy Commission
20 information that, in fact, with the new power
21 plants coming on line, that that particular mix is
22 actually cleaner than just growing the current
23 existing mix.

24 The baseline is very important because
25 that determines the emissions increases due to

1 various technologies, how much that would be.

2 So, if your baseline is lower, for
3 example, then those emissions increases appear
4 greater. And as I say, with the new power plants
5 coming on line, it turns out that the California
6 in-state mix is actually cleaner. At least that
7 was the information that we were given by the
8 Energy Commission.

9 If there is anyone from the Energy
10 Commission that would like to add to that, on the
11 particular -- okay.

12 PRESIDING MEMBER LAURIE: Not at this
13 point, I guess.

14 MR. WILSON: Okay.

15 PRESIDING MEMBER LAURIE: Ms. Smith.

16 MR. GREENBERG: I'm Eileen Smith with
17 the Solar Development Cooperative. I've been
18 working with Jeff in the interconnection standards
19 workshops.

20 I have a few questions, I guess, one
21 thing I didn't see in any of these evaluations was
22 the cost of photovoltaics. Why is that not
23 included?

24 MR. WILSON: Because the studies
25 really -- what we're looking at are air quality

1 impacts. We have limited resources at the Air
2 Resources Board, so the study really has to be
3 focused on technologies that may be problematic.
4 And photovoltaics have no emissions and they are
5 not going to be an issue for air quality.

6 I mean they are -- as I say, we have
7 limited resources and we really need to be focused
8 on what we perceive to be areas that may need
9 further study.

10 MS. SMITH: Okay, so I guess I would
11 just wonder if maybe they could include something
12 in there to say photovoltaics is not an issue
13 because there's no air quality problems?

14 MR. WILSON: Well, let me -- please, let
15 me step back from that. I will -- the study did
16 not look at these. I will let the other speakers
17 talk to photovoltaics. I believe there's someone
18 who is going to present some information on
19 photovoltaics.

20 MS. SMITH: But the Air Resources Board,
21 then, is focusing on remediation, not preventative
22 technology, is that what I understand?

23 It sounds like that you're focusing more
24 on analyzing polluting resources, but that can be
25 very deceptive if you don't include nonpolluting

1 resources in your study. Because you're actually
2 analyzing technology.

3 MR. WILSON: Yes.

4 MS. GRAU: I want to say I reviewed the
5 report and one comment I made, I noticed the same
6 thing that there were no renewables, PV or wind.
7 But I believe because the definition of peak, it
8 has to meet the peak need, it has to be
9 dispatchable.

10 And I believe because wind is not, it's
11 an intermittent technology, they couldn't include
12 it. PV, even though the peak often matches, it
13 almost could be considered dispatchable. I think
14 that's another reason why they didn't include it.

15 But I made a note of that, too, and
16 covered it that way.

17 MS. SMITH: If people wanted to see that
18 included, what would we do, Jeff? If we wanted
19 to --

20 MR. WILSON: At this point, phase II has
21 been considered in the ARB, but it's not within
22 the budget this year. So, we are certainly open
23 to public input as far as what research needs to
24 be done, but as I say, there are limited resources
25 available for research.

1 MS. SMITH: Okay. The other question I
2 have is in terms of what's the timeframe for your
3 cost analysis? Is that five years, ten years, 20
4 years? For cost effectiveness.

5 MR. WILSON: Well, this study looked at
6 the year 2002 and 2010.

7 MS. SMITH: So, it's eight years.

8 MR. WILSON: Well, the next ten years.

9 MS. SMITH: 2010, in terms of the
10 investment and cost over time, that's what I was
11 looking at.

12 MR. WILSON: Oh, the cost over time. It
13 was 20 years.

14 MS. SMITH: Twenty years.

15 MR. WILSON: The technologies were
16 amortized over 20 years.

17 MS. SMITH: And how does the cost of
18 gasoline going up 231 percent in the last 18
19 months affect that?

20 MR. WILSON: The cost of fuel was based
21 on Energy Commission information.

22 MS. SMITH: Okay. So there was no
23 prediction about future costs?

24 MR. WILSON: Well, there are predictions
25 that are built into the model, but they were based

1 on Energy Commission information.

2 MS. SMITH: And I have two more
3 questions. One is full cost dispatch. Is that
4 being employed? I mean like with PV, it may cost
5 a little bit more up front, but you got a 50-year
6 life cycle.

7 And yet with the gas turbines, saying
8 that diesel engines are cheaper, but yet have
9 higher particulates. Is there any costing
10 included in that in terms of how that's going to
11 affect the cost overall.

12 Like, I mean are they including any full
13 cost dispatch or social cost dispatch in their
14 analysis of what diesel fuel is going to cost us
15 in terms of health care, polluting and all that
16 kind of stuff? Is there any full cost dispatch
17 included, or is this just the cost of purchase
18 from the client bill?

19 MR. WILSON: I would have to defer to
20 DUA on that.

21 MS. SMITH: DUA?

22 MR. WILSON: Um-hum.

23 MS. SMITH: Okay. Who is that, who
24 would I talk to there?

25 MR. WILSON: Either Susan Horgan or Joe

1 Ianuchi.

2 MS. SMITH: Susan or Joe. Okay. Then,
3 the other thing that I was real concerned about in
4 the interconnection standards, and I still have a
5 confusion about, is if systems are somehow pushed
6 through or permitted where they shouldn't be, in a
7 noncompliant area, it's my understanding from our
8 discussion in the interconnection workshop is that
9 they would just simply be fined, but not
10 disconnected.

11 And there was some confusion as to how
12 that would be mediated. You have the air quality
13 standards, I guess the question I'm asking is, how
14 are you going to administer the law if someone has
15 interconnected a system in a noncompliant area?

16 It sounds like nobody wants to take
17 action to disconnect. And the only thing that
18 might happen is that they would get fined. So the
19 pollution would remain.

20 MR. WILSON: One of the things that I
21 tried to clarify is that the Air Resources Board
22 does not permit DG. We are responsible for mobile
23 sources. The local air district has
24 responsibility for permitting stationary sources
25 including DG.

1 And so really this is a question that
2 should be directed to the local air districts.

3 MS. SMITH: The local air district?

4 MR. WILSON: Yes.

5 MS. SMITH: Would they then ask the
6 utility to disconnect the system?

7 MR. WILSON: I can't speak for the local
8 air districts.

9 MS. SMITH: Is there like a hierarchy of
10 local, state, federal?

11 MR. WILSON: Oh, certainly there is.
12 The Environmental Protection Agency -- ARB has
13 oversight authority; EPA has oversight authority
14 under the Clean Air Act.

15 MS. SMITH: Okay.

16 MR. WILSON: Yes. But, the local
17 districts have direct authority for permitting and
18 enforcing.

19 MS. SMITH: According to the California
20 Criminal Penal Code, anyone can go and arrest
21 someone who has a noncompliant system running in
22 their area, and actually charge them with a crime.
23 But yet we're not finding any solid foundation
24 upon which to, if we find a system that's in
25 noncompliance, what's the steps we have to go

1 through and what can we expect in terms of getting
2 it disconnected or --

3 MR. WILSON: As I say, the first thing
4 you need to do is to go to the local air district.

5 MS. SMITH: Okay. And if that doesn't
6 work, then we come to the ARB?

7 MR. WILSON: I think you'll probably be
8 able to resolve it at the local air district.

9 MS. SMITH: The local air district,
10 thank you, Jeff.

11 PRESIDING MEMBER LAURIE: Any more
12 questions?

13 MR. ALVAREZ: Manuel Alvarez from
14 Southern California Edison. I have two questions.
15 One is I guess a question of methodology, and the
16 other one is kind of a question on process.

17 Let me see if I understand that the
18 method that was used to do the evaluation on
19 market penetration. What was done is that each of
20 the DG options was viewed in isolation --

21 MR. WILSON: Correct.

22 MR. ALVAREZ: -- percentage, and yet
23 none of the system overall growth was displaced at
24 all? So the system still met its gross -- into
25 2002 in the future?

1 MR. WILSON: No, the system was
2 displaced by the portion of capacity that DG met.
3 So, it was basically --

4 MR. ALVAREZ: Okay.

5 MR. WILSON: -- a competition between a
6 particular DG technology and the system. So, if
7 the system took up 50 percent of that capacity,
8 then DG would take up the remaining 50 percent.

9 MR. ALVAREZ: Okay, so for in the
10 example here we have the microturbines of 28
11 percent. In essence that came in and displaced 28
12 percent of the new capacity on the overall system
13 for the state?

14 MR. WILSON: Yes.

15 MR. ALVAREZ: And so that wasn't added
16 at all at some future date?

17 MR. WILSON: Correct.

18 MR. ALVAREZ: In some manner it was
19 deferred is what you're saying, in the methodology
20 here?

21 MR. WILSON: Yes, --

22 MR. ALVAREZ: I guess the second
23 question would --

24 MR. WILSON: -- for new load growth, not
25 total growth, not the total system, but for new

1 load growth.

2 In other words, say the total capacity
3 is approximately 50 gigawatts, and new load growth
4 is like 1 gigawatt per year. Well, if it's 25
5 percent, it's 25 percent of that 1 gigawatt.

6 MR. ALVAREZ: Okay. I guess the load
7 growth patterns that I'm assuming, since you were
8 relying on the Energy Commission forecast, you
9 were also relying on the Energy Commission demand
10 forecast for growth?

11 MR. WILSON: Yes.

12 MR. ALVAREZ: Okay. I think I
13 understand what happened there.

14 And then there was no interaction
15 between the various DG technologies at all?

16 MR. WILSON: Correct.

17 MR. ALVAREZ: Okay. And I guess my
18 procedural question then is you mentioned the
19 report is draft. When does it become --

20 MR. WILSON: Yes.

21 MR. ALVAREZ: -- final, and I guess I'm
22 curious, I'm not sure what the ARB -- significance
23 of a final document from the ARB means.

24 MR. WILSON: We expect the final in
25 early June. And this is just a first cut, because

1 there are so many caveats and so many limiting
2 assumptions to this study, that we really do need
3 to go further to draw any firm conclusions.

4 But, the idea of the study is to focus
5 on the areas where we may have problems.

6 MR. ALVAREZ: And the ARB plans to do
7 those follow-up studies?

8 MR. WILSON: That has been proposed. It
9 was not included in this year's budget, but it
10 will be proposed in the following year.

11 MR. ALVAREZ: Thank you.

12 PRESIDING MEMBER LAURIE: Thank you, Mr.
13 Wilson, we appreciate the presentation very much.

14 MS. GRAU: We are a bit behind schedule.
15 It is the noon hour. I was wondering if you were
16 interested in taking a lunch break now and coming
17 back at 1:00, or should we proceed with a couple
18 of the presentations? Do you have a preference?

19 PRESIDING MEMBER LAURIE: We're right on
20 schedule, are we not?

21 MS. GRAU: No, we have -- it's now noon,
22 and at 11:10 to noon we have a panel of three
23 speakers that we haven't gotten to yet.

24 PRESIDING MEMBER LAURIE: Let's go --

25 MS. GRAU: Can I first ask, do any of

1 the three, Steven Greenberg, Kevin Duggan, David
2 Reinhart, do you have any conflicts that would
3 prevent you from doing your presentations after
4 the lunch hour?

5 Preference to go now. Steven, how about
6 you? Okay.

7 PRESIDING MEMBER LAURIE: Okay, well,
8 let's go as far as we can go this morning, that's
9 fine.

10 MS. GRAU: Okay.

11 PRESIDING MEMBER LAURIE: We will have
12 to take at least some kind of lunch break before
13 1:00, so what do you expect, Ms. Grau? Another
14 half hour, 40 minutes or so?

15 MS. GRAU: Yes. Just a second.

16 (Off-the-record discussion.)

17 MS. GRAU: Okay, let's proceed then,
18 with the goal of keeping each presentation to ten
19 minutes or less because of questions.

20 And we'll start with Steven Greenberg.

21 PRESIDING MEMBER LAURIE: Okay, that's
22 fine.

23 AUDIENCE SPEAKER: I've personally never
24 heard Steven talk less than ten minutes.

25 PRESIDING MEMBER LAURIE: Well, we have

1 set the timer on the microphone, so he may be
2 speaking, you just won't hear him.

3 (Laughter.)

4 MR. GREENBERG: Okay, my name is Steven
5 Greenberg and I'm with Intergy Power. We're a
6 developer of distributed energy resource projects
7 in large commercial and industrial applications.

8 And our goal is to provide lower costs,
9 cleaner and higher reliability energy for today's
10 power intensive users.

11 And we believe that the changes in the
12 economy have created changes in needs for energy
13 that didn't exist 15 or 20 years ago. And because
14 of that, the new dynamic has taken place. And to
15 provide those needs, the current utility structure
16 just isn't able to do it.

17 So there's an integration of different
18 things that are required; web-based information;
19 aggregated buying; on-site generation; and energy
20 efficiency and optimization. And then capturing
21 the collateral benefits.

22 And we look at these as a whole. And
23 the distributed energy resources are important, is
24 an important part of it. And here's a picture of
25 sort of how the interaction of everything works

1 together.

2 And we've had some experience with
3 success at this point in terms of the siting and
4 the permitting process. And we've learned some
5 lessons. And I guess I want to share those with
6 you.

7 And so let me just blast through real
8 quickly. We look at, for on-site generation we
9 look at solar; in fact, we deployed the largest
10 solar system in North and South America. It's a
11 340-kilowatt system, that the Energy Commission
12 has sponsored, as well as Department of Energy.

13 In microturbines, gas -- engines, fuel
14 cells, they're all an important part of what we're
15 doing. And there's very substantial benefits.
16 Optimization -- get through this -- this is
17 difficult, I apologize. Forward again. Okay.

18 One of the things we think is important
19 to do in terms of looking at on-site generation
20 and energy efficiency, distributed energy resource
21 measures, is capturing the economic benefits. And
22 it's something that hasn't been looked at real
23 closely.

24 I see people from the industry today
25 making cases that distributed energy resources, in

1 fact, are dirtier than the current system. But
2 yet I've seen substantial science that says
3 otherwise. I think it's important for us to come
4 to an agreement in which areas and which
5 technologies that applies to.

6 In particular, with regards to -- okay,
7 let me just address this real quickly. In my
8 opinion, and again I'm a developer, so I invest
9 money in projects that I think are going to have a
10 substantial return, for myself and provide value
11 for my customers.

12 And there's a substantial amount of
13 money being invested. And so I believe that the
14 question is not if, but when, for distributed
15 energy resources.

16 And it's happening now. And the best
17 indicator that it is going to continue to happen
18 is if you look to Wall Street. Notwithstanding
19 the NASDAQ and what happened last week, fuel cells
20 have become the darling of Wall Street. Actually
21 energy technology, not clicks, but actually
22 bricks, and they're representing -- the amount of
23 money flowing into the market in terms of the IPOs
24 that have occurred, and now into other energy
25 technologies, as our companion here, Kevin,

1 probably cannot talk about today, indicates that
2 this is where the future is.

3 And regardless of what our own
4 individual opinions are, the economics of what's
5 driving the industry is what is going to force
6 changes to occur.

7 And I think one of the potential issues
8 that can occur is that the regulatory process can
9 almost become obsolete, because the pace of change
10 is so fast. And industry and commerce is going to
11 do what it needs to do to move forward anyway.

12 The issue is to do it in an
13 environmentally sound manner, and in fact, if we
14 can create a better environment for it, that would
15 be fantastic.

16 So, we're seeing things moving forward.
17 The ability of the T&D system to support continued
18 load growth is in question. The ISO has issued
19 the TriValley RFP for load reduction. RFPs have
20 come out, recognizing that in the short term,
21 anyway, the ability of the system to deal with
22 peak load is in serious jeopardy in California.
23 Similar things have occurred in Chicago, in Texas,
24 in New York as well.

25 So we have this -- there's some sample

1 projects. The one that I'm most familiar with is
2 one of mine, Pleasanton Power Park. And we had a
3 project that was a greenfield development; it's
4 19.5 acres in Pleasanton Power Park in Pleasanton,
5 California. And it was going to be a standard,
6 tilt-up industrial development.

7 The City of Pleasanton is not
8 particularly enamored with industrial development.
9 And we would have probably seen anywhere from a
10 year to two year planning entitlement process to
11 get this type of project approved in terms of the
12 landscaping, the heights of the building, the
13 traffic studies, all the issues that you normally
14 go through with siting a project.

15 Well, because of the nature of the
16 project and the nature of the energy problems in
17 the TriValley that the local communities are aware
18 of, we were able to substantially shorten that
19 process. And I'll come back to that in just a
20 minute.

21 But the point is that -- and this
22 actually answers, Commissioner Laurie, your
23 question earlier. In our negative declaration the
24 use of the distributed energy resource
25 technologies were included in the planning

1 commission's report. So, we're not siting or
2 permitting these technologies individually.

3 Four Times Square in Manhattan, here is
4 a huge building, it's a wonderful development by
5 the Durst Corporation that deployed many different
6 types of distributed energy resource technologies.
7 So it's an example of, you know, projects
8 happening.

9 The L.A. Convention Center, another one,
10 very high profile, with a lot of innovative
11 technologies. And the First National Bank of
12 Omaha, using almost completely peak fuel cell
13 power and rotating storage.

14 The siting considerations, then, these
15 are the lessons we've learned. Planning
16 commissions and communities respond favorably to
17 the perceived green development. Here's the story
18 of Pleasanton. After sitting and listening for a
19 two-and-a-half-hour discussion on whether someone
20 could plant four trees in their yard, the planning
21 commission, in 20 minutes, unanimously approved
22 Pleasanton Power Park without any questions at all
23 regarding the use of the industrial capacity, or
24 anything like that, or the landscaping. Just
25 wonderful kudos about this is great, big solar

1 system, helping energy problems in the TriValley.
2 This is exactly what we've had in our general
3 plan. How many more of them can you build. How
4 quickly.

5 Each commissioner, there's five, took
6 less than five minutes to talk, and at the end it
7 was a 5-0 vote, and the most ardent anti-growth
8 person was the one who made the motion to pass it.

9 So no negative comment from the
10 community. The green aspect, and also to the
11 extent that there are energy problems in a
12 constrained area, the community is aware of it,
13 they see this as a benefit.

14 They also respond very favorably to
15 reducing dependence on the local utility, for
16 whatever reasons, it's deregulation, as a whole in
17 this country, customer choice, just people wanting
18 something different. They look at having an
19 option to not be as dependent on the grid, on the
20 single source, as a plus. And this was stated in
21 the planning commission statements which are
22 available, they're public record.

23 What happened, though, and this alludes
24 to what Shirley says, that the forward momentum we
25 got in the planning commission really kind of was

1 lost in the building permit process, where it's
2 time to actually go make your bricks and sticks.

3 And in that case we had to spend a lot
4 of time educating people, bringing them up to
5 speed, looking at other areas where things have
6 been deployed. There is really no guidance for
7 the local permitting people.

8 In the end, we're okay with going
9 forward with our project, but it took, for a lot
10 of reasons, it took about twice as long to
11 actually get the permits in place as we thought.
12 Many of them had nothing to do with any of the
13 distributed energy technologies that were there.
14 But the favorable push to expedite this project
15 was lost in the building permit process.

16 What we found is that many of the local
17 codes don't address these technologies at all.
18 And you can make an argument that says it's an
19 appliance; or you can make an argument that says,
20 no, there's much more serious implications on
21 health and safety, consumer protection. And there
22 really isn't guidance today. And hopefully, we'll
23 get that from this proceeding.

24 We also found that the air districts,
25 themselves, were uncertain how to treat

1 distributed energy technologies. And what to do
2 with, if you have just one, or if you have
3 multiple units together on a single site. What
4 constitutes a site. Questions like that.

5 And we found, of course, that the
6 developer in this -- it's incumbent upon you to
7 educate the city, the county, the district staffs,
8 et cetera.

9 So, the recommendations that we have is
10 really we need to create industry standards for
11 specific technology groups. Not leave it up to
12 one of discretionary process.

13 State and local standards have to be
14 developed, as well. Education programs for
15 regulatory staff, very important. It would be
16 wonderful to see a CEC guidebook on deployment of
17 distributed energy technologies for building
18 permit departments and et cetera.

19 Educating utility staff. You know,
20 there's as much of a problem in dealing with the
21 interaction with the actual utility, whatever
22 local utility you're interfacing with is
23 important. And for most of them these
24 technologies are very unfamiliar, whether they be
25 electric or gas.

1 And then education programs for
2 contractors and customers, as well, because
3 ultimately these are the people who are using the
4 thing.

5 So, that's what our experience has been,
6 and some of our recommendations. And I think I
7 went a few minutes over ten, okay.

8 PRESIDING MEMBER LAURIE: Thank you, Mr.
9 Greenberg, very much. And let's hold questions.

10 Ms. Grau.

11 MS. GRAU: Okay, next we would like to
12 hear from Kevin Duggan with Capstone Turbine.

13 MR. DUGGAN: I'm going to take a minute
14 to see if I can connect my machine to your system.
15 If I fail, we'll take another approach.

16 (Pause.)

17 MR. DUGGAN: My name is Kevin Duggan and
18 I am the Manager of Regulations and Environmental
19 Issues for Capstone Turbine Corporation. Capstone
20 is a manufacturer of microturbines, and some like
21 to speak to as that of a microturbine
22 manufacturer. And it's important to understand my
23 comments, to understand where I come from, to know
24 where I'm going, you need to know where I come
25 from.

1 Our technology is quite small. We are
2 microturbine. Our current product is a 30
3 kilowatt microturbine. We see microturbine as
4 something that ranges up to maybe 300 or 500
5 kilowatts. So they're quite small, relative to
6 some of the technologies that might be defined
7 even as distributed generation.

8 You can see from these pictures there
9 are three machines there. Each is about the size
10 of a domestic refrigerator. And --

11 PRESIDING MEMBER LAURIE: Are those 30
12 kilowatts?

13 MR. DUGGAN: Each are 30 kilowatt
14 machines, that's right.

15 So, generally in our experience, as
16 systems generally don't come under any regulatory
17 or permitting requirement. Most --

18 PRESIDING MEMBER LAURIE: What is your
19 typical customer for a 30 kilowatt?

20 MR. DUGGAN: The 30 kilowatt machines,
21 we have a range of different customers. This is a
22 new technology, and so our approach to introducing
23 a new technology, which is in effect relatively
24 expensive at the moment, our approach is to find
25 those high value customers.

1 And so we've been very focused. And we
2 focus on things at this stage like land fill gases
3 where the fuel is free and oil and gas recovery.
4 We also look at, focus on cogen applications
5 whereby we can extract the greatest value from the
6 fuel that's used in the machine.

7 PRESIDING MEMBER LAURIE: Thank you.

8 MR. DUGGAN: This machine was
9 commercialized in December 1998. So, this kind of
10 product has really only been available in the
11 marketplace, in a market of some tradition and
12 duration, for about 16 months.

13 The logic, I guess, the economic logic
14 and the change from previous thinking in respect
15 to power supply is that we moved from a situation
16 of economies of size, which is what has driven
17 power technology over the last 40, 50 years, to
18 one of economies of scale. And this diagram shows
19 the smaller and quite expensive power plants of
20 the 1930s, small and expensive per megawatt.

21 The drive of the technology has been to
22 make bigger machines and reduce the cost per
23 kilowatt by doing so. And so in the '80s we get
24 to the super gas turbines, 400 megawatt machines,
25 which are priced reasonably low at \$300, \$400 a

1 kilowatt.

2 The concept of a distributed generator
3 manufacturer is that we mass produce. And so we
4 take advantage of economies of scale rather than
5 economies of size.

6 And, of course, this has implications
7 for our ability to customize product. The large
8 small numbers of machines can be customized to
9 meet customers' demands. We produce -- we
10 minimize customization, and we meet the various
11 requirements of customers by providing them with
12 assurances in the form of a UL certification.

13 We are similar size to a refrigerator;
14 we are similar to a refrigerator in other ways, as
15 well. We're UL certified, we have very low
16 maintenance, high reliability. We have internally
17 built in safety. We design for plug and play. We
18 capture within the box of the microchip, and we
19 capture all of the safe and easy maintenance and
20 interconnection issues, features that we can. We
21 customize.

22 There are implications of that for
23 permitting processes. We would like to know, we
24 would like not to have to have each of our
25 machines permitted on site, because we can't

1 customize our technology to -- economically, at
2 least, to each site.

3 What we would really like to know very
4 much is what standards are required by California.
5 What standards in terms of what is not a land use
6 issue. Our two meters square footprint, is that a
7 land use issue? I presume it's not.

8 We want to know what level of emissions
9 we need to live under. And we'd like to know
10 things about what sort of fluid emissions, liquids
11 emissions. We don't have any, but for those
12 technologies that do, what are the limits.

13 Essentially the story that we would like
14 to have answered, or the question we would like to
15 have answered, is what are the parameters, the
16 permit parameters. Tell us that they are, and
17 we'll go and build a machine to meet them.

18 So, specify the requirements of the
19 technology so that manufacturers can focus their
20 R&D, and manufacture the appropriate product. And
21 we can design and build product to meet the
22 standards.

23 Now, I go to the automotive industry and
24 the way that industry is regulated. In many
25 respects our technology is more like an automobile

1 than it is like a conventional power plant.

2 In effect, you can see from this picture
3 here that we have actually installed, and we do
4 install microturbines in hybrid electric vehicles.
5 They provide an on-board generator to charge up
6 the batteries in electric vehicles and allow the
7 vehicle to drive further.

8 I put the one at the top there so you
9 can see the engine in the back of it. And the one
10 down at the bottom here, I put in. It is a hybrid
11 electric, although you can't see it, but it's
12 sexier looking than the other one. So I thought
13 we should have that there, too.

14 (Laughter.)

15 MR. DUGGAN: The engine in the bus is
16 accepted by the EPA, the USEPA, for installation
17 and use. The engine has been accepted. And so
18 that engine can be installed in these buses
19 without further certification, further work.

20 Now, the question is why can't we have a
21 similar process for stationary applications. That
22 is virtually the same engine. Let's move it
23 across to the stationary application.

24 So, I think I've really already made my
25 point, and summarized the conclusions that I've

1 reached. Small distributor generators are really
2 very much like automobiles. They're mass
3 produced. They can be produced to certain
4 standards.

5 It would be very good if we could define
6 a set of standards, make it streamlined, make it a
7 process similar to the one we defined in the
8 interconnection process, a streamlined
9 interconnection process. If you pass certain
10 screens, if your emissions are below a certain
11 number, if your footprint is of a certain size,
12 your water emissions are a certain level, and the
13 like, then you pass the screen and there is no
14 need to going through a full permitting process.

15 I think that's really the message, as a
16 manufacturer, that I'd like to leave with you.
17 Thank you.

18 PRESIDING MEMBER LAURIE: Thank you, Mr.
19 Duggan, very much.

20 MS. GRAU: Our final speaker before the
21 lunch break is Dave Reinhart with Sacramento
22 Municipal Utility District.

23 MR. REINHART: Thank you. In order to
24 save time I thought we'd forego the overheads. I
25 only had a couple anyway, and we'll kind of cut to

1 the chase.

2 I work in the PV program for SMUD, as
3 mentioned, for about a year now. One of my
4 primary responsibilities has been work with the
5 various planning agencies and permit agencies to
6 get our systems installed -- to our customers.
7 Today we have about 70 contracts signed, 45
8 permitted, over 30 systems installed. I've
9 personally permitted something over 25 systems.

10 There are five planning agencies within
11 Sacramento. We've permitted systems in four of
12 those five agencies. And through a cooperative
13 effort, working with them, we've developed a
14 standardized permit submittal application package,
15 which has really eased the process for us and
16 them. It's very easy now to assemble a package.

17 They're looked at numerous times. It's
18 routine. They can quickly see that we're
19 compliant or not. And if not, they'll get back to
20 us.

21 I've a handout and I'll cut to the
22 chase. On the last page I was trying to summarize
23 some of the lessons that we've learned. I was
24 going to try make this a little tongue-in-cheek
25 humorous system for those of us that have ever

1 been involved with planning and permit agencies.
2 Sometimes it can be a little frustrating. But I
3 think I've learned through this experience as to a
4 lot of good reasons for that.

5 The first thing on the list is expect
6 the unexpected. When we first were getting ready
7 to permit our first system, I worked with a
8 nonstaff architect who had permitted numerous
9 systems through the counties and cities. And so
10 we put together a permit package that we just
11 thought was stellar.

12 And we contacted an individual at the
13 county who is -- and he's very cooperative and
14 helpful. And we went down there thinking this is
15 going to be a slam-dunk. It was anything but
16 that.

17 We went down with a mindset that we're
18 permitting a power plant. And what we were told
19 is this is like a re-roof. Because of the weight
20 of the system, it exceeds five pounds a square
21 foot. And within the city and the county,
22 anything that exceeds five pounds a square foot
23 requires a structural engineer's analysis, wet
24 stamp report.

25 We were totally unprepared for that. So

1 what we had to do then was hire an engineer. We
2 were a little miffed by it, thinking that they
3 were a little out of line, but we didn't want to
4 complicate things.

5 So we hired a structural engineer. We
6 went out to the site. And come to find out it was
7 really a good effort. Because we were going to
8 install PV systems over the garage. And what we
9 found out by inspecting a little closer is that
10 the homeowner had cut the truss members and
11 installed a platform to store things.

12 And so the roof not only wasn't code
13 compliant without any load, now we have the
14 additional weight load that he was storing up in
15 his attic. And so the lesson that we learned out
16 of that was you really need to look a little
17 closer, that the building inspectors have some
18 good viewpoints. We need to be aware of that when
19 we're out there. We're not just sticking power
20 plants up on the roof someplace. There are life
21 safety issues and we need to be more observant.
22 So it was a heck of a lesson for us, and we
23 rejected, as a result, several homes that had
24 noncompliant roofs.

25 The interesting part, from my

1 perspective, was that we anticipated a lot of
2 problems on the electrical side, and never had one
3 single comment on the electrical systems on the
4 permitting; not from any of the four
5 jurisdictions. That was a real surprise to us.

6 Third on my list is a tongue-in-cheek
7 reminder that I said California engineers are
8 best. This is a simple reminder that if you have
9 a structure or something that requires a
10 professional engineers license to be installed,
11 that needs to have a California wet stamp on it.

12 And we ran into that when we were
13 installing system PV modules, as you may know, set
14 above the roof. So it was not so much the weight,
15 but the wind gets under it and lifts it. And the
16 manufacturer had a very good engineering analyses
17 to show that the support was adequate for that
18 roof in Sacramento roof conditions, but it wasn't
19 a California engineer.

20 And so when I showed it to the planning
21 department, they said, oh, this is really good,
22 this is a very good report. Come back with a PE
23 stamped California on it.

24 So then we brought the engineer in to
25 look at that. Again, it was a lesson for us. I

1 should have looked at that ahead of time, and I
2 didn't. I've been involved in engineering work
3 for consulting engineering firms in Sacramento, I
4 know these things. And I just -- looked like a
5 great report to me, but I wasn't meeting the needs
6 of the inspector.

7 And so that led to my fourth item,
8 inspector issues are your issues. My job going
9 into this, I thought, was to build or install
10 cost-effective systems in a timely manner. Their
11 issue is life saving. I have to make those my
12 issues in order to facilitate an installation.
13 It's a heck of a lesson that we've learned.

14 We've also learned that plan checkers
15 aren't field inspectors. When we went down to the
16 planning departments, we met with their structural
17 engineers, electrical engineers, and we got by
18 him. And by this point in time on the first
19 system we hired a structural engineer to do the
20 evaluation. We beefed up the person's roof. We
21 finished the installation. We thought, by golly,
22 now we're off and running.

23 So we called for a final inspection.
24 The inspector goes out there, walks up, knocks on
25 the homeowner's door and says, I don't have any

1 idea what I'm looking at. I can't inspect this
2 thing.

3 Big mistake from our perspective because
4 we had asked to provide if there was any need for
5 training, but we asked the engineers that. We
6 didn't go and ask the field inspectors that.

7 Subsequently, we went with our
8 contractor, did an hour dog-and-pony show; showed
9 how we met the life safety devices; showed them
10 how the systems worked. So, just because we meet
11 half of the puzzle, we have the other folks to
12 deal with, too.

13 We can't expect, which I think we're
14 inclined to, the field people to know as much as
15 we know. We're doing primarily residential
16 systems. And the residential inspectors are often
17 out of the trades. So you might have an
18 electrician, but he's out there to inspect the
19 plumbing, the framing, the roofing, the trenching,
20 and doing all those things.

21 And then we bring in a new technology
22 that they've never seen before. And so working on
23 that level, we have to be cognizant of that and
24 work with them over time. And once we've done
25 that, I think it'll have long-term dividends.

1 So, when you're looking at introducing a
2 new technologies and depending -- I think you need
3 to budget time for it, you need to sit down with
4 the folks on the up-front side, present your case,
5 understand that you need to present your case in
6 their terms and their interests, life safety. How
7 does this meet current code. How does it meet
8 the, does it have proper fire ratings and what-
9 have-you.

10 And my last point is reason will usually
11 prevail. I'm not going to tell you that we
12 haven't bumped heads with folks through these 25
13 systems, had differences of opinion. But one
14 thing we found by sitting down and talking and
15 working together over time, without I don't think
16 any exception, we've been able to reach common
17 ground on everything.

18 That was it. Thank you.

19 PRESIDING MEMBER LAURIE: Thank you, Mr.
20 Reinhart, very much. Gentlemen, we appreciate all
21 your presentations.

22 We need to break for lunch now and we'll
23 see you back here at 1:15. Ms. Grau, is that
24 okay, or do you need to do it at 1:00?

25 MS. GRAU: No.

1 PRESIDING MEMBER LAURIE: 1:15. Thank
2 you.

3 (Whereupon, at 12:30 p.m., the workshop
4 was adjourned, to reconvene at 1:15
5 p.m., this same day.)

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1 AFTERNOON SESSION

2 1:25 p.m.

3 MS. GRAU: We have three presentations
4 that we'd like to do. The first is Chris Kinne of
5 the California Environmental Protection Agency.

6 PRESIDING MEMBER LAURIE: We understand
7 that you are in another hearing, and we very much
8 appreciate your willingness to come over and talk
9 to us.

10 MS. KINNE: Thank you very much. I
11 appreciate being asked because I always like to
12 tell the story of what program I work in. I
13 currently work at the California Environmental
14 Protection Agency. I have some CEQA knowledge, 17
15 years ago I worked for the State Clearinghouse
16 where EIRs and negative declarations and
17 exemptions were filed.

18 Since that time I've worked at the
19 Department of Toxics, permit streamlining. And
20 currently at CalEPA, I am the manager of our 13
21 permit assistance centers. And I left some
22 brochures outside, and some more information about
23 our centers.

24 But basically they were started four or
25 five years ago, and at the time businesses were

1 leaving California. And the reason they were
2 leaving California was our regulations were too
3 complex, they were too hard to understanding, they
4 were duplicative, whatever. That kind of
5 feedback.

6 So we decided to put people out in the
7 field from our departments, and we basically dealt
8 with environmental permits, whether waste
9 discharge requirements or co-locating with air
10 districts. We've done that.

11 In fact, we don't have any of our own
12 buildings. What we do is we co-locate with cities
13 and counties, and with their planning departments,
14 or with their HAZMAT people, because we like to
15 think of it as seamless government. Because the
16 public doesn't care if you wear a federal hat or a
17 city hat, it's still a hat that's a regulator.

18 So, we also work in conjunction with the
19 local air districts. I know the South Coast Air
20 District is here. And we have people from their
21 business assistance programs who come on a regular
22 basis to our centers, actually getting the word
23 out to the customers.

24 We are pushing things at our centers now
25 on education to the customer, doing workshops,

1 pushing prevention kind of information.

2 But I started to say, we started out in
3 the environmental field. We are finding, when our
4 customer came in, mostly it's the smaller type
5 operations, like we call them the mom-and-pop,
6 less than 50 employees, who really want to do the
7 right thing, don't know how, don't have the
8 wherewithal to hire a consultant. That's one of
9 our main customers.

10 Also, another one would be a consultant
11 who would come to say, I want to start a gas
12 station in Sacramento. I want to site a small
13 power plant in Tuolumne County. Wherever it is.

14 They would come and ask us and we would
15 help them with the environmental permits. But
16 then we decided to go the next step in customer
17 service and actually go on out and do the research
18 for them whether they needed to go to the
19 secretary of state's office, industrial affairs
20 offices, consumer affairs, kind of got the whole
21 picture for them. Help them get the applications;
22 help them find the right person to talk to.

23 And I know you're talking about CEQA,
24 and I know you're talking about streamlining,
25 perhaps, but I think from our perspective one of

1 the main ways to streamline projects is early up
2 front identify who the players are. And I think
3 you've probably already talked about that. I saw
4 some of the other presentations.

5 But identify who you need to come to the
6 table right away. The project proponent walks in
7 the door, you already have your contact at the air
8 district; you already have your contact at the
9 HAZMAT people; you already know the land use
10 planning people to contact.

11 And that's where I think our 13 centers
12 can be of assistance in helping identify all those
13 key players. Because that's what we do every day.
14 That's kind of our jobs.

15 We have the physical locations, and then
16 kind of what evolved out of that, was like we have
17 these 13 stand-alone little centers, and there was
18 the internet out there. This was like five years
19 ago, and what do we do with the internet and how
20 does it work for our customers.

21 Well, one, it worked for us internally
22 because we could share information with each
23 other. Somebody who's doing research in San Diego
24 didn't have to repeat the wheel, you know, up in
25 Eureka type thing.

1 So, we created an internet site called
2 CalGOLD. That's also in the brochure. And
3 there's samples of what CalGOLD are. It's
4 C-a-l-g-o-l-d.ca.gov. And what it's based upon is
5 pretty simple, but a lot of work behind it.

6 First thing you have to tell the system
7 what location you want to do your project. And it
8 has all the counties and all the cities in it and
9 all the unincorporated. So, first you select by
10 location.

11 Then you select by business type. And
12 currently we don't have a business type on line
13 that could work for you guys, but we could
14 certainly do that working with the Energy
15 Commission or the PUC or whomever.

16 You would actually scroll down and you'd
17 pick whatever you guys want to put on we'd call
18 it. And it gives you a report, it's on the
19 screen, you can print it out. And the reason why
20 we -- it goes from the city approvals to the
21 county approvals to the regional approvals to the
22 state approvals to the federal approvals that you
23 need. It's the whole gambit from everything of
24 business license up to IRS.

25 And the air districts are all linked to

1 us. That's why we have to ask you what county or
2 what city, because we want to send you to the
3 planning department, -- check the zoning is
4 correct. This one happens to be a department
5 store in San Luis Obispo County. But the first
6 thing is city building construction permit.
7 Second one is a burglar alarm, business license,
8 hazardous materials license, zoning approval,
9 county, authority to construct, permit to operate.

10 And if, in fact, the air district, the
11 South Coast does, has a website link that takes
12 you to the application, then we are linked to
13 that. That's one of our goals, is let you find
14 out as much as you can on-line, and that you would
15 get the applications on line.

16 I even think South Coast has some
17 program where you could fill out the information
18 and submit it online.

19 Every city and county is a little bit
20 different on what they have available. Quite a
21 few of our state agencies, you can find out permit
22 license information on line, and link to it.

23 So, I believe the 13 centers can assist
24 you physically going there, or calling them. It's
25 a 1-800 number on our brochure. And they cover --

1 we just were in Crescent City last week, but the
2 whole state, we can take care of a customer
3 wherever they are.

4 It would be kind of exciting because
5 although it's streamlining, it's actually in EPA's
6 perspective, it's a pollution prevention thing.
7 And if you know ahead of time that you need to get
8 a waste discharge, and you need an air district
9 permit, you're not going to go out there and
10 inadvertently build something without all the
11 proper approvals.

12 It really helps you. And we've always
13 heard from industry, you know, tell us up front
14 how long it's going to take, how much is it going
15 to cost, you know, that kind of thing, that early,
16 up-front identification, and the right people to
17 get to. That's half the battle right there.
18 You're not out there searching. Some of you are
19 nodding your head, you've been there, searching
20 for the right person.

21 And so often staff will change. You
22 thought you knew the right person at the planning
23 department, and they're changed.

24 So that's where I think that we can
25 really help you, not necessarily in the CEQA part,

1 that's something totally you guys can decide. But
2 once it is determined it's a project and you're
3 moving through that land use process, we'd like to
4 be involved so that every permitting, licensing
5 authority that might be needed can, number one,
6 help comment on that environmental document, but,
7 two, let your project applicant know right away up
8 front what to submit, what they need to see.

9 We're charting new ground here, and
10 that's also kind of fun kind of thing to do, too,
11 I think.

12 We look forward to any way that we can
13 help, whether it's planning departments or
14 districts or, you know, private public, to get a
15 project in the door and out the door with all the
16 right approvals and all the bells and whistles.
17 And it's a win/win for everybody. That's what I
18 think.

19 I know I did it pretty quickly. I saw
20 some sample reports outside there, that we, in
21 fact, could generate off the internet once we did
22 the research, and some input from you. So,
23 actually all the local city and county approvals
24 you need, and if there's websites out there that
25 we need to direct people to, whether it's Energy

1 Commission or PUC, we'd be more than happy to do
2 that.

3 That's one of our jobs, working with
4 other state agencies. And getting the word out
5 for them. So we can help from the regulatory
6 perspective, I think, and the customer's
7 perspective, also.

8 And I left the brochure which has the 1-
9 800 number, and the actual physical locations of
10 all the centers. And I have business cards. But
11 I'd more like to take questions if you have
12 anything to ask me.

13 PRESIDING MEMBER LAURIE: Thank you, Ms.
14 Kinne, that was a very helpful presentation.

15 Questions? Mr. Tooker.

16 DR. TOOKER: My name is Chris Tooker
17 from the Energy Commission. I work in the
18 environmental protection office.

19 I'm wondering whether you had experience
20 relating to the question that Commissioner Laurie
21 asked earlier about projects which may be
22 commercial, but they happen to contain some
23 industrial components. And how you've dealt with
24 that in terms of the regulatory process. Are
25 there certain thresholds of sizes of industrial

1 components or types that cause a commercial
2 development to go one way or another in terms of
3 permitting?

4 MS. KINNE: CalEPA, our agency, itself,
5 does not issue any permits.

6 DR. TOOKER: No, I mean in terms of the
7 guidance you're providing for your permitting and
8 contacting agencies. Does that make a difference
9 in terms of the way you package a development
10 having both industrial and commercial components?

11 MS. KINNE: Oh. I'm sure it would, yes.
12 We have to work with you, I guess, and help
13 identify what that would be.

14 DR. TOOKER: Thank you.

15 MS. KINNE: We could do that, yes.

16 PRESIDING MEMBER LAURIE: Questions?

17 MS. SMITH: Eileen Smith from the Solar
18 Development Cooperative. I'm very interested in
19 putting together data -- I'm an architect by
20 trade, and photovoltaics is my primary interest.

21 But I'm interested in putting together
22 designs standards, and of course, that's a
23 permitting of type, I don't think you actually
24 have to have a written permit, but you have to
25 have approval --

1 MS. KINNE: Right.

2 MS. SMITH: -- in a lot of
3 neighborhoods. And sometimes you have to have
4 building permits.

5 Do you have databases on design
6 standards, or would you be interested in
7 contracting with small businesses to put together
8 a database?

9 MS. KINNE: We don't have any
10 information about that at this time. We don't
11 have any real direction to go that way. What
12 we're trying to do with this is a roadmap, and
13 take them actually to the local entity that has
14 jurisdiction over architectural.

15 MS. SMITH: Oh, I see, so they would
16 know what the jurisdiction is.

17 MS. KINNE: Right.

18 MS. SMITH: So if we called you, then we
19 could find out where we would get information
20 about that permit?

21 MS. KINNE: That's what we find out,
22 where do you go -- what door do you go in and who
23 do you see and what's the phone number.

24 MS. SMITH: That's excellent.

25 MS. KINNE: Because we're not the

1 experts on all that. We have to rely on you.

2 But, that --

3 MS. SMITH: The direction.

4 MS. KINNE: Yeah, absolutely.

5 MS. SMITH: Well, we sure do appreciate
6 that service.

7 MS. KINNE: We like to give that kind of
8 service, because whatever it does to help the
9 customer, and it's some kind of -- you've got our
10 webpages. You see something we've missed or we
11 need to add or we're remiss in, or something like
12 that, --

13 MS. SMITH: Yeah, I don't know where
14 that would fit in, but I might call --

15 MS. KINNE: I'm not sure, yeah.

16 MS. SMITH: -- and chat. Thanks.

17 MS. KINNE: I can tell you how to get
18 the database.

19 PRESIDING MEMBER LAURIE: Ms. Kinne,
20 thank you very much, very helpful presentation.

21 MS. KINNE: Thank you.

22 PRESIDING MEMBER LAURIE: We appreciate
23 your taking the time out to be here today.

24 MS. KINNE: Thanks.

25 PRESIDING MEMBER LAURIE: Ms. Grau.

1 MS. GRAU: Next we'd like to hear from
2 Ken Lim of the Bay Area Air Quality Management
3 District.

4 PRESIDING MEMBER LAURIE: Good
5 afternoon, Mr. Lim.

6 DR. LIM: Thank you for allowing me to
7 make a few comments on the implications on air
8 quality of what's happening with electricity
9 utility restructuring and potential growth of
10 distributed power generation sources.

11 And this is from the perspective of the
12 local district, the Bay Area Air Quality
13 Management District in the San Francisco area.
14 But I suspect I reflect some of many of the
15 concerns of other districts, as well.

16 I don't need to go through this. We
17 have a well educated audience here on state law
18 AB-1890 and utility restructuring, divestiture of
19 existing central power plants such as PG&E,
20 Southern California Edison and San Diego Gas and
21 Electric, and the creation of various oversight
22 agencies, such as the ISO.

23 One area of concern to us is, for
24 example, this power exchange and free market
25 exchange of electricity.

1 PRESIDING MEMBER LAURIE: Mr. Lim, we're
2 not picking you up. You have to move about a foot
3 over to your right. Now, how you do that and see
4 the machine at the same time, I don't know.
5 Perhaps you can read it off the screen.

6 DR. LIM: Got it, thank you. Our
7 concern is, for example, the electricity that will
8 be generated may be based on lowest cost per
9 kilowatt hour, which, in general, is obviously the
10 most efficient and a good thing. But not in all
11 cases would that be the environmental choice.
12 Just a fact that we need to take into
13 consideration.

14 During the divestiture proceedings one
15 of the concerns is that the new owners of these
16 divested power plants would have a vested economic
17 interest to drive up the production of electricity
18 and use of those plants in an effort to recover
19 the costs of purchasing those plants.

20 And there are neighborhood concerns
21 about increased pollution as a result of increased
22 firing rates.

23 Indeed, in our district historically
24 central power plants were the single largest
25 category of stationary source emissions of NOx,

1 the ozone precursor. In fact, accounting for
2 nearly 20 percent of stationary source NOx
3 emissions in our district.

4 What we have found is that the best
5 mitigation measure for these potential increases
6 has been implementation of best available retrofit
7 control technology rule, BARCT rule, which is
8 mandated by the California Clean Air Act, with
9 oversight from the CalEPA and the Air Resources
10 Board.

11 Our board of directors in 1995 -- '94,
12 adopted such a regulation 9-11, which covered the
13 central power plants.

14 I'm going to spend just a few more
15 seconds about these power plants, because this is
16 what we're comparing with existing system with
17 potential growth in distributed generation in
18 either augmentation or substitution of some of
19 these central production.

20 From a nitrogen oxides emissions point
21 of view historically these were high emitters, as
22 I indicated earlier. We're talking about ranges
23 from 175 to over 500 ppm on a dry basis.

24 To put it in perspective, our rule which
25 we adopted in '94, put in place a federal RACT, or

1 reasonably available control technology limit of
2 235 ppm NOx. That's roughly comparable to federal
3 new source performance standards with a new
4 boiler, and the rest of the country would be
5 required to permit at.

6 Our rule, and there are similar rules at
7 other large air districts, air basins here in
8 California, requires that these limits be
9 ratcheted down to a so-called best available
10 retrofit control technology.

11 So every year the limits go down. And
12 currently, in the year 2000, we're at about a 90
13 ppm level, and the systems are actually operating
14 something better than that.

15 Our rule has a flexibility element to it
16 that allows the operators to average the emissions
17 from the various boilers, so they can select their
18 own best available, or on a cost effective basis,
19 control strategy, rather than command and control
20 from the air district.

21 We found that that's in the best
22 interests of all parties, including the
23 environment, as well as the ratepayer.

24 Ultimately the systemwide average that
25 these central utility units have to reach is 15

1 ppm. That's over 90 percent reduced from the
2 original baselines historical values.

3 So to compare that with a new central
4 power plant, that is typically currently permitted
5 working with the ARB and the California Energy
6 Commission, at 8 ppm on this basis, or 2.5 ppm on
7 a 15 percent O2 basis.

8 So we're not far from, even existing old
9 plants are not far from the brand new plants.

10 Distributed generation emissions, and
11 what the impact is, as the speaker from ARB noted
12 so eloquently this morning, Jeff Wilson, it all
13 depends on what technology you're talking about,
14 and which ones actually make the inroads into the
15 market. So it can vary from essentially zero or
16 negligible emissions to well over 1000 ppm of NOx
17 emissions, for example.

18 This chart is a little blurry. Is it
19 possible to put it on the PC?

20 (Pause.)

21 DR. LIM: Great, thank you very much.
22 Sorry to have delayed, the VuGraph didn't show up.

23 I think this puts some perspective of
24 what's happening to the central power plant, which
25 is the major source of the NOx emissions in our

1 district.

2 Historically they have been in the 15,
3 20 to 35 tons per day magnitude. A tremendous
4 tonnage of NOx emissions into the atmosphere.

5 The variation you see in the production
6 of NOx from the central power plants, in large
7 part is actually due to the weather we have in
8 California, and actually the northwest, because
9 these emissions are the result of combustion of
10 fossil fuels, such as natural gas and fuel oil.

11 Those wet years, when we have heavy
12 rains, there's abundant hydroelectric power that's
13 available to California, and also cheaper
14 hydroelectric power can be imported from the
15 Northwest, such as from Washington. As a result,
16 purely on the weather alone, the NOx emissions can
17 vary by a factor of 2, based on the amount of fuel
18 fired.

19 What we have done is with the adoption
20 of the retrofit control rule, the emissions have
21 dramatically decreased down to a current level of
22 10, 15 tons per day from the original 30, 35 tons
23 per day.

24 The green bar charts to the right are
25 actually our projections, which we have in

1 cooperation with the Energy Commission Staff. And
2 we actually made those projections back in 1997 as
3 part of our clean air planning.

4 The reality is that we are operating at
5 a pace that's below, as far as emissions, below
6 the projection, which from an air quality planning
7 perspective, is excellent.

8 We can take part of the credit due to
9 the implementation of the rule and the local
10 utility actually instituting controls in advance
11 of the requirements. But in reality we probably
12 have to attribute at least half of it to the fact
13 that the last three years have been very good wet
14 years for us.

15 Everyone in this room is aware of all
16 the new power plants that have been proposed, some
17 of which have been approved, to be built in this
18 coming century, next five years or so.

19 Certainly it's a positive that new,
20 cleaner, more efficient power plants may phase out
21 these older facilities. But that's not
22 necessarily all roses. Because the amount of
23 capacity just in the Bay Area alone that's
24 proposed is nearly, I suspect actually over three-
25 quarters of the existing capacity.

1 Certainly there's growth potential, but
2 whether these new power plants will displace and
3 retire the existing old plants, that's not for
4 certain. In fact, we may become -- have surplus
5 electricity and we may be a net exporter of
6 electricity from the air basin. So, in effect, we
7 may be a net importer of pollution with all these
8 new power plants coming in.

9 We certainly are not in a position to
10 block, or would want to block creation of new,
11 more efficient power sources. We feel that the
12 best mitigation measure in this area again is the
13 analog to our early rule, which is best available
14 retrofit. Now, this is new source, so the analog
15 is best available control technology, BACT, for
16 these new power plants. And going through new
17 source review, including emissions offsets; going
18 through a public review process involving the
19 local community, as well.

20 What about the air quality impacts of
21 distributed generation sources. Jeff Wilson went
22 into quite a bit of detail of the various
23 technologies. In the interests of time I'm not
24 going to go into that detail.

25 The conclusion was it's difficult to

1 predict the exact penetration. The study, for
2 example, looked at each DG technology as a
3 substitute for, or augmentation to the current
4 central power plant mix. But the study did not go
5 into the interaction of what if all the sources
6 competed for the market. There's a lot more work
7 to be done, and the information they have gathered
8 is already very valuable.

9 Such sources as internal combustion
10 engines have a high market potential. And that's
11 of concern to us in our district. Shift some of
12 the electric power production from these well-
13 controlled, central power plants, to many small,
14 but inherently higher polluting, power generating
15 units, such as for example, an uncontrolled
16 internal combustion engine emits, on a per
17 kilowatt hour generated basis, over 200 times more
18 NOx than a well-controlled, central power plant.

19 So, while each individual engine may not
20 be a dominant factor, but cumulative, when you
21 have lots of many multiple engines, you can easily
22 get into an area of significance when you have
23 this 200 factor times.

24 Even with so-called best available
25 control technology, one with BACT, best available

1 control technology, all the bells and whistles,
2 including selective catalytic reduction, for
3 example, would contribute about 20 times more NOx
4 than the central power plant.

5 And this is before discussing the
6 concerns of toxic emissions from say diesel fired
7 units that emit significant quantities of fine
8 particulates, PM10.

9 In our district we do permit diesel
10 engines. This is not to say that we don't allow
11 them. We do permit it. There's a time and a
12 place for these engines. And clearly, this
13 scenario concern -- and I'll say a few more things
14 on it in the following slide.

15 On the other hand, if the DG we're
16 talking about includes photovoltaic and wind and
17 solar and so forth, fuel cells, that's clearly the
18 positive way, as far as that.

19 I'd like to get into some of the
20 permitting issues from a local perspective, and
21 clearly that's important to the developer, as
22 alluded to this morning.

23 Manufacturers would clearly prefer to
24 have uniform BACT standards, for example. At
25 least through all of California. And it's

1 probably difficult enough to have standards for
2 the rest of the country, and more stringent levels
3 for California, but if you run into multiple
4 agencies, to manufacture in one air basin and not
5 another, is obviously a very costly venture.

6 And certainly our district is interested
7 in pursuing uniform BACT standards. And I imagine
8 other districts, as well.

9 There's going to be a balance, needs to
10 be a give and take in discussion from all parties
11 involved, because, for example, the authority for
12 setting BACT levels rests with the local air
13 districts. And the degree of stringency often
14 depends on the degree of severity of the air
15 pollution problem within the air basin.

16 Setting a uniform BACT standards that
17 everyone can agree on may be setting such a level
18 that's so stringent that it may not be the best
19 economic and viable option for the manufacturer.

20 On the other hand, a more relaxed BACT
21 standard may not be able to generate the support
22 of the large number of districts within
23 California. This is certainly an area that needs
24 a meeting of the minds.

25 Another issue is the required -- what I

1 call required alternative process or source as
2 BACT. In the past air districts like ours, we
3 traditionally looked at what is best available
4 control technology for the specific source or
5 source category that the applicant is interested
6 in getting a permit.

7 For example, generally comes in the door
8 and wants to permit his internal combustion engine
9 that fires diesel. We already have actually
10 published BACT limits for such an engine. And he
11 can read it off the chart and go from there.
12 Because we've developed what's considered BACT for
13 that engine category and that fuel.

14 We may want to step back, considering
15 some of the health impacts, and say what is best
16 available control technology. Clearly, a spark-
17 ignited, natural gas fired engine would be
18 superior as far as lower emissions. So, isn't
19 that best. So we have been permitting in that
20 direction, that the best available is, at least
21 for engines, is that spark-ignited, perhaps lean
22 burn combustion, low emitting engine.

23 Doesn't mean that we don't permit diesel
24 engines. There's a time and a place. For
25 example, it's a remote location and natural gas is

1 not available, or economically available, it's a
2 portable engine, needs to be mobile. Then there's
3 a place for that diesel engine.

4 But the applicant would have to make the
5 case before the air district that the diesel
6 engine would be essential.

7 We can even take a step further back
8 from that level alternative process source of BACT
9 by saying look at it from a pounds of pollution
10 per kilowatt hour of electricity generated. And
11 set a standard on that basis that we don't care
12 whether you're going to permit to install an
13 engine there, or combustion turbine or
14 microturbine, or a steam boiler. As long as it
15 meets the pounds per kilowatt hour basis, that is
16 considered BACT, and that would be the way to go.

17 We haven't gone that step yet. That's
18 one of our considerations.

19 Equipment recertification. Certainly
20 having the distributed power generating source and
21 perhaps control device, for example a catalytic
22 combustion gas turbine, or a microturbine,
23 precertified by the permitting agency would
24 certainly accelerate the permitting process.

25 For example, it can go through a CEQA

1 review process and study, so that future permits
2 of like the same engine would only have to address
3 any specific local impacts which were specific to
4 the case. In other words, the general case be
5 handled through precertification.

6 I think the key to equipment
7 precertification is there's going to be an
8 agreement on the earlier standard, which is a
9 uniform BACT standard. If that standard can be
10 agreed on, I think the equipment precertification
11 will much more easily follow.

12 The next issue is the emissions offsets.
13 Since the new sources of significant emissions
14 must provide so-called emission reduction credits
15 for emission offsets as part of permitting, the
16 larger or emitting distributed generating sources
17 may be in the process of consuming some of these
18 limited ERCs or emission reduction credits.

19 So certainly in the interests of the air
20 basin to encourage the low emitting DG
21 technologies, so as not to dry up the existing
22 emission reduction credits.

23 Moving on, exemption levels. Our air
24 quality planning is on a tri-annual basis, and
25 includes the rules and regulations that pertain to

1 our inventory of sources emissions.

2 We make certain assumptions about what
3 sources are out there. If a certain category of
4 distributed generation or any other source
5 category grows far beyond our early planning
6 expectations, we may have to evaluate that
7 inventory, in fact, and change our rules or
8 exemption levels.

9 For example, currently our exemption
10 level for internal combustion engines is 250
11 horsepower in our district. With the growth and
12 use of engines, we have found it necessary to
13 propose lowering that exemption level down to 50
14 horsepower, which the permit will be required, and
15 emissions limited.

16 And prohibitory rules is, by example,
17 the BARCT rules that I discussed earlier.

18 And then finally, last, but certainly
19 not least, and perhaps even highest importance is
20 the CEQA review process. It is often the rate-
21 limiting step. And initial studies, as well as
22 ultimately perhaps negative DEC's, negative
23 declarations and EIRs are often necessary for some
24 of these new technologies for which the emissions
25 are not well quantified, or there is a local

1 impact.

2 Our experience has been that the CEQA
3 review is conducted primarily with the local city
4 or county government which has a general permit or
5 land use prerogative. And CEQA is most often
6 triggered when there is a health impacts or a
7 toxic emissions component to that source, which
8 raises the environmental impact and concerns.

9 We certainly have a lot of work to do in
10 our air district. Some of the things that we've
11 been working on is that we were one of the
12 original participants in the Energy Commission's
13 roundtable discussion about distributed power
14 generation. We've been involved in some of the
15 background work in information on the committee
16 reports on environmental and siting
17 considerations.

18 We encouraged developers, applicants to
19 make an appointment and meet with us at our
20 office. These pre-meetings, we find it very
21 helpful, we lay out the rules and requirements.
22 And reciprocally we learn about the process,
23 because it's an educational process, about the
24 various technologies.

25 We do post our specific BACT and

1 emission offset requirements on our website,
2 baaqmd.gov. And even those technologies for which
3 there is no prior BACT determination, we have a
4 BACT workbook on our website which guides the
5 reader to what the cost analysis involves, how
6 does one determine BACT or best available control
7 technology. There's a methodology for helping you
8 develop what the BACT level should be.

9 The determination, obviously, is the
10 final made by the district. But that's helpful if
11 the background information is supplied by the
12 applicant.

13 And perhaps most popular is the offset
14 requirements. For small facilities the district
15 actually helps facilities that emit less than 50
16 tons per year of a criteria pollutant such as NOx,
17 and reactive organic gases, with emission,
18 required emission offset credits.

19 In other words, facilities under 15 tons
20 per year are under the offset trigger. Between 15
21 and 50 our district, with certain preconditions,
22 would supply the necessary offsets. And this is
23 our way of helping small businesses. And I think
24 this is a fruitful area for DG technologies to
25 explore.

1 Having said that, you can see with the
2 limited availability of these credits, it's in
3 everyone's interests to encourage the use of those
4 technologies which require the minimum offsets or
5 lowest emissions.

6 We actually have an accelerated permit
7 system available. Some of our industry in the
8 area have taken advantage of it. If they complete
9 an application, submit it and it meets certain
10 criteria, the primary one would be the emissions
11 of criteria pollutants be less than 10 pounds per
12 highest day. And there are no significant toxic
13 emissions. And we publish on our website a long
14 list of toxic compounds and their emissions
15 triggers on a pounds per year basis.

16 If you're under any of those emission
17 limits, and you're under 10 pounds a day, and a
18 few other miscellaneous requirements, you're going
19 to have to submit an application. And once it's
20 in our door, you can go ahead and construct. You
21 don't have to wait for our final evaluation. The
22 specifics on that are given in our website under
23 regulations. And I can discuss it later, if you
24 wish.

25 Another program we have is the equipment

1 precertification. Honestly, the program is there.
2 We have had very limited success. It's a
3 relatively new program and I think it needs more
4 time to work, but we haven't had any significant,
5 real requests for precertification yet.

6 But these are some of the areas we are
7 trying to facilitate in streamlining the permit
8 process. And we've had the most success with the
9 accelerated permit program.

10 I've taken more than my share of time.
11 I just wanted to say that we provided a very
12 simplified version of comments. We haven't
13 discussed any of the other pollutants, such as
14 PM10. What the local impacts are, for example.

15 These power plants have tall stacks.
16 They tend to be -- emissions tend to go with the
17 wind, so to speak. Some of these DG sources,
18 while they may be in some cases lower emitting,
19 they're also at a lower level, at ground level
20 where they may have the biggest impact.

21 For example, these internal combustion
22 engines would have a significant impact. And they
23 tend -- even standby engines tend to be sited
24 toward industrial areas, which tend to be areas of
25 low income. So a very clear issue is

1 environmental justice as part of the CEQA process.
2 This is a particular concern with some of these
3 smaller sources, which will be located very near
4 receptors and residences.

5 Last year the Energy Commission
6 completed a report that was submitted to the
7 Legislature saying that the regulatory structure,
8 to deal with some of the air quality impacts of
9 the electric utility restructuring, was in place,
10 including interfacing with the air districts.

11 Having said that, it just means that
12 perhaps the structure is in place. We have a lot
13 more work to do as far as education and the
14 learning process, as well as modifying the --
15 improving the permit process.

16 Thank you.

17 PRESIDING MEMBER LAURIE: Mr. Greenberg.

18 MR. GREENBERG: Steven Greenberg with
19 Intergy Power. Ken, an area of particular
20 interest to me is in deploying technologies such
21 as solar photovoltaics or taking energy efficiency
22 measures where we can show demonstrated and
23 measurable reduction, and actually taking kilowatt
24 hours off the grid, to be able to generate more
25 emission credits, I know that's difficult because

1 the issue for the district is where's the
2 reduction actually coming from. Is it within the
3 district or from without.

4 But to really help this industry move
5 forward, I think it logically makes sense. Do you
6 see any possibility of the district's moving
7 towards some measure where we can generate new
8 credits for things like energy efficiency and
9 solar photovoltaics?

10 DR. LIM: You hit the nail on the head.
11 Under the state law, before we issue an emission
12 reduction credit, we have to demonstrate, among
13 other things, that it's real and quantifiable, and
14 identified as permanent.

15 By your replacing an existing source, if
16 you can identify that source, that would certainly
17 help to demonstrate the reality of the emission
18 reduction. But if it's a general reduction, it's
19 difficult to quantify because you don't generate
20 the electricity in one spot, it could be generated
21 by any number of other sources in another spot.

22 And that's where the hang-up is. I
23 agree. I don't have a solution to that. But, if
24 you have a specific example, if you can identify,
25 for example, if your photovoltaic allows your

1 facility to shut down one or two of the steam
2 boilers at the plant, we can point to that as a
3 real reduction, and credits.

4 And that is, in a sense, our way of
5 encouraging some of these cleaner technologies,
6 such as photovoltaics.

7 MR. GREENBERG: As a follow-up, I would
8 submit to you, Commissioner, that this could be an
9 area of great interest that the state could sort
10 of take all the various districts under one
11 umbrella and allow this sort of emission credit
12 generation to occur.

13 PRESIDING MEMBER LAURIE: Ms. Rivera.

14 MS. RIVERA: Shirley Rivera. I just
15 want to make a comment, tag it onto Steven's
16 comment. Not necessarily with respect to an
17 umbrella over the air districts, but there are
18 efforts in other parts of the country where, under
19 a trade type program, I won't go into it in great
20 detail, though, that renewable energy and energy
21 efficiency are considered under some of the
22 efforts in what's called ozone transport region;
23 and areas that do have demonstrated ozone
24 transport issues.

25 There's 22 states, and without going

1 into great detail again, federal EPA does have
2 some guidelines out there at least to try to look
3 at mechanisms to include renewable energy and
4 energy efficiency and some mechanism to at least
5 recognize the pound per kilowatt hour benefits,
6 the pound per megawatt hour benefits.

7 And that discussion continues.
8 Understandably the California regulatory structure
9 for air districts are not set up on a -- program,
10 but just to throw that out there, maybe as part of
11 some discussion later on this afternoon.

12 PRESIDING MEMBER LAURIE: Yes, Ms.
13 Smith.

14 MS. SMITH: Eileen Smith from Solar
15 Development Cooperative.

16 Along the lines of what Mr. Greenberg
17 was saying, I think that would be great to have
18 new incentives of some sort for no-emissions. I
19 notice that your sign said, there should be
20 another category there, less than 10 pounds. And
21 it said significant, not significant emissions --

22 DR. LIM: Toxic emissions.

23 MS. SMITH: Yeah, toxic emissions.
24 Maybe there would be another category that said
25 no-emissions. Because I think that's a category

1 that's not getting the pat on the back that it
2 really needs.

3 We can haggle over how many pounds does,
4 you know, and how many inches, or whatever it is
5 that's different. But if you can get a lot of
6 nonpolluting, no-emissions, out there in the
7 marketplace, I think that's going to put us
8 further ahead.

9 And there just doesn't seem to be quite
10 the incentives there that need to be there for no-
11 emission technologies.

12 PRESIDING MEMBER LAURIE: Thank you very
13 much.

14 DR. LIM: And we do try to put some
15 incentives. We have a list of sources that would
16 be actually exempt from permit requirements. And
17 we have that published in our website.

18 So, that, in itself, I think is a major
19 incentive. You don't have to meet with the air
20 district, you don't have to wait for the paperwork
21 and the permitting process. We've cut that all
22 out. You just go in with -- we have such an
23 exemption list.

24 And if you have recommendations for a
25 specific technology that the data shows zero

1 emissions, we can incorporate that within our
2 rules. That's the ultimate in permit, accelerated
3 permit, no permit.

4 And the second thing is through the use
5 of emission reduction credits. If it can replace
6 an identifiable polluting source, it is a
7 potential for getting emission reduction credits,
8 which are traded in the open market, and which
9 have a definite dollar value.

10 PRESIDING MEMBER LAURIE: Yes, sir.

11 MR. PUFFER: I'm Matt Puffer with Engine
12 World. My question goes to you were talking about
13 your precertification program of engines. I was
14 hoping you might be able to expand a little bit on
15 that, because that's been a major process in some
16 of the siting/interconnection, just from that
17 side, seeing if it might be something that could
18 be packaged together for installations within the
19 state.

20 DR. LIM: Precertification has been in
21 the area as a program that's in place. but we
22 haven't had any takers, and it may be that we
23 don't get the word out.

24 Secondly, we haven't developed the full
25 infrastructure to explain what all the

1 requirements are. On the other hand, nobody has
2 asked us what those requirements are.

3 I think the best way is your company or
4 your organization would like to come to us, we can
5 work, help develop such a new construction. In
6 other words, our board of directors have approved,
7 and it's on our books now, to have such a program.
8 And the applicant for precertification can be just
9 an applicant for a permit, or can be a
10 manufacturer for a specific model.

11 In fact, one area of possibility based
12 on some of the earlier discussions this morning is
13 that instead of getting permits and control from
14 the district, what about the manufacturer level.
15 If, indeed, some of this DG is at the appliance
16 level, so to speak.

17 An example would be home furnaces and
18 water heaters. They're a combustion source; they
19 emit pollutants; they're an area source. Each one
20 individually is not significant, but collectively
21 they are.

22 Most large districts, such as South
23 Coast Air Quality Management District and the Bay
24 Area, have a standard for home furnaces and water
25 heaters. And thank goodness, it's the same

1 standard, essentially the same rule, whether it's
2 South Coast or Bay Area.

3 And the manufacturer just needs to
4 certify with test data with our district that they
5 meet the standard, so many nanograms NOx per heat-
6 up. And they're free to sell this appliance, this
7 water heater.

8 And the homeowner, the buyer, he doesn't
9 have to worry about a permit from the district; he
10 knows it's in compliance because it's being sold
11 in California.

12 And I think that approach may be a
13 fruitful avenue for some of these distributed
14 generation technologies, the smaller ones that can
15 be treated as an appliance.

16 So, the precedent is already there.
17 It's been on our books for several years.

18 PRESIDING MEMBER LAURIE: Okay, thank
19 you, Mr. Lim, very very much.

20 Ms. Carter, good afternoon.

21 MS. GRAU: Our next speaker is Sheryl
22 Carter from Natural Resources Defense Council.

23 MS. CARTER: Thank you, Commissioner.
24 I'm Sheryl Carter with the Natural Resources
25 Defense Council. I'm with the energy program

1 there.

2 We've been involved in the distributed
3 generation and actually distributed resources
4 debate for quite awhile. As a matter of fact
5 we've done what we can in many instances to help
6 make some of these projects actually happen,
7 photovoltaics and fuel cell projects.

8 So, we've very interested in this issue.
9 Distributed resources have tremendous potential.
10 And we've been talking today about some of the
11 negatives. We've been talking in a lot of other
12 proceedings about a lot of positives.

13 Distributed generation has been held out
14 as clean, though, in most of the reports that I've
15 seen in the press, and it's really more of a mixed
16 bag. And I'm really glad that we've talking about
17 how to address this issue today.

18 I'm going to use much of my time today,
19 which I'm going to keep very short, to share with
20 you what we've discovered this mixed bag looks
21 like based on research done at NRDC. And also
22 some of the things that I think that the Energy
23 Commission, as well as the state and local
24 agencies here today, and hopefully listening in,
25 might be able to do to address this, and keep us

1 going down a cleaner, more efficient path in this
2 area.

3 We obviously don't have all the answers.
4 There's a lot that all of us don't understand.
5 And a lot of those things have been pointed out
6 today, as well as the things that we do know.

7 We need more information. We need a lot
8 more interagency work, which I'm glad has been
9 pointed out today, and I'm glad to see so many
10 agencies here today. Work and cooperation among
11 the agencies to come up with the answers.

12 Today's a good start. I hope it
13 continues and we're eager to help with that.

14 Finally, I'm going to briefly address
15 our views on the CEQA questions. Generally, we're
16 not convinced that a categorical exemption from
17 CEQA is necessary or appropriate, so I'll be
18 addressing that, as well.

19 Existing air regulations, even with the
20 more stringent standards in the nonattainment
21 areas like the South Coast Air Quality Management
22 District, would not prevent small generators from
23 developing into a substantial source of air
24 emissions.

25 If just one-half of 1 percent of the

1 U.S. demand for electricity were met by
2 uncontrolled diesel generators, the country's
3 annual NOx emissions alone could increase by 5
4 percent.

5 This increase would be much larger if
6 the generation were displaced with the new, clean,
7 combined-cycle gas turbines.

8 Now, this is obviously a worst case
9 scenario, and we don't have to go there. But,
10 it's important to look at what the possibilities
11 are. And I'm glad that the Air Resources Board is
12 doing the study that they're doing, and I can't
13 wait for it to come out.

14 Some of the questions in the workshop
15 report had to do with what do we know about the
16 air impacts of distributed generation. We know
17 the impacts are mixed. Some of the technologies
18 are very clean, like wind and solar. Some of them
19 are simply not, like diesel.

20 We also know that environmental
21 performance is largely unregulated, or spotty, at
22 best.

23 Two of my NRDC colleagues in New York,
24 Nathaniel Green and Rol Hammerslag, recently
25 completed a report which will be published in the

1 June edition of the Electricity Journal which --

2 PRESIDING MEMBER LAURIE: Scott, do we
3 want to lower the lights a little bit? Would that
4 help?

5 MS. CARTER: Is that better? Can people
6 see that now?

7 They recently compared DG technologies
8 on the basis of their local regional and global
9 impacts. The emissions that were examined include
10 carbon dioxide, NOx, SO2, carbon monoxide and
11 PM10.

12 They're compared on an output basis in
13 pounds per megawatt hour generated. Also
14 presented is the emissions of combined cycle
15 turbines as the reference case. So you have a
16 comparison there.

17 We've augmented those emissions by 10
18 percent to account for the line losses. And also
19 to estimate one guaranteed benefit of distributed
20 generation.

21 This table provides an overview of the
22 cost, efficiency, and emission characteristics of
23 the major distributed generation technologies.
24 There are handouts so people can look at these
25 numbers more specifically.

1 One thing that might be a lot easier to
2 look at is this graph right here which compares
3 the different emissions with the combined cycle
4 turbine, in terms of the solid black circle is
5 much worse emissions than the combined cycle
6 turbine; the half circle is about the same as; and
7 the clear circle is much better than.

8 Just some details to point out about
9 these comparisons that will be important for
10 interpretation of them.

11 These numbers are ranges. With the
12 lower end the best case emissions representing
13 manufacturers' published claims. And the worst
14 case, or the high end, representing field test
15 data.

16 Many of the lowest emission levels are
17 only anticipated to be achievable by 2003. And
18 are not currently available on any commercial
19 model. And some may not be developed absent
20 regulations mandating a market for cleaner
21 machines.

22 We didn't have field test data for
23 microturbines and fuel cells, so we just used the
24 manufacturers' claims here.

25 Also important to point out is that the

1 emissions from the distributed generation
2 technologies are presented as uncontrolled,
3 reflecting current lack of regulations for the
4 generators of this size.

5 So, obviously there are many measures
6 that could mitigate these impacts. We need to
7 make sure that these measures are encouraged. For
8 example, combined heat and power could greatly
9 mitigate the environmental impacts of fuel cells,
10 biomass, microturbines, internal combustion
11 engines. All of which generate waste heat.

12 Catalysts or other post-combustion
13 controls, and maintenance are potential other
14 mitigations that could be used.

15 We're going to need an air pollution
16 prevention program plan targeted as distributed
17 generation in the state, and nationwide.
18 Otherwise our DG policies could end up promoting
19 the cheaper, dirtier technologies, and this is
20 something that we're very concerned about.

21 We did that with central station
22 generation. And we went down that road and we had
23 to back track. And I think we've all learned
24 enough now so that we don't have to go through
25 that, down that same road again with distributed

1 generation technologies.

2 We need to open the market for new
3 technologies, but in such a way that explicitly
4 addresses the environmental performance of all the
5 technologies in the marketplace.

6 Some different things to look at to
7 address these issues. We need a performance
8 standard which has been talked about by a couple
9 of different people today. Building code
10 modifications, which I believe was mentioned by
11 someone. And perhaps we need to look at an
12 inspection and maintenance program, as well.

13 In terms of permitting, if these
14 technologies really take off, permitting on a unit
15 basis will become time consuming and expensive.
16 The Energy Commission and/or the Air Board could
17 initiated a collaborative effort, should initiate
18 a collaborative effort among industry, agencies,
19 environmental groups and consumers to address the
20 technical and policy issues regarding performance
21 standards and testing and labeling requirements.

22 I think that CADER would be useful in doing
23 this, as well.

24 In terms of building codes, while not
25 directly an issue in this particular workshop,

1 building codes offer an ideal framework for
2 optimal sizing and installation standards.

3 The Energy Commission could extend codes
4 to cover the energy use of distributed generation
5 and design them to encourage cogeneration
6 applications, as well. And, as I mentioned,
7 inspection and maintenance programs should also be
8 explored.

9 We have some information on
10 environmental impacts, but we need more. For
11 example, what exactly slips by the permitting
12 process? That wasn't very clear to me. It seems
13 like it differs depending on, you know, what part
14 of the state that you're in.

15 What is out there now? What of that is
16 still operating, and which units are not
17 operational. We assume that it's harder to site
18 new generation than to keep the old permits. Is
19 the new displacing the old and the dirty? Is this
20 likely to happen? What can we do to make this
21 happen?

22 There are a lot of questions out there.
23 I'm sure everybody could add quite a few to the
24 list.

25 There appears to be a need for an

1 interagency database to help us look at all of
2 these things, and more.

3 The Energy Commission could possibly
4 provide local agencies with guidance and
5 expertise, perhaps formulating generic issues,
6 summaries, or guidance documents.

7 The Air Board needs to develop technical
8 standards. I'm not sure if I have all the right
9 agencies here, because it is sort of confusing,
10 who does what. But, just take my recommendations
11 and insert whatever appropriate agency is supposed
12 to be doing this.

13 At any rate, we need to do more beyond
14 this workshop in order to answer the questions
15 that need to be answered.

16 Just real quickly, to allow for public
17 comment here, on CEQA, we don't see, at this point
18 justification, or even a need for categorical
19 exemption from CEQA.

20 We're concerned that a blanket or a
21 categorical exemption may have unintended or
22 unforeseen consequences. There is such a thing as
23 a negative declaration that exists for this
24 purpose. And I think that we should continue
25 using that option.

1 I think streamlining of the process is
2 an excellent idea, and I agree that the more work
3 that can be done up front with the public and with
4 the agencies, the better.

5 That's all I have, thank you.

6 PRESIDING MEMBER LAURIE: In talking
7 about the setting of standards, or the suggesting
8 of standards by state agencies, is that something
9 then that can be used by local governments for the
10 environmental documentation, so it would stand in
11 the place of a master EIR, for example? On this
12 issue.

13 MS. CARTER: I would imagine that you
14 would be able to adapt those. I'm not sure what
15 form that they would take, but, yeah.

16 PRESIDING MEMBER LAURIE: The argument
17 being that as long as a piece of machinery meets
18 standards, it provides no significant impact.

19 MS. CARTER: Yeah, you might have some
20 differences in standards necessarily, depending on
21 the air district, right, because you have
22 attainment and nonattainment areas.

23 We would love to see the standards set
24 at the nonattainment area level all over the
25 place, but that might not be possible. But I

1 would imagine you would be able to do something
2 like that.

3 PRESIDING MEMBER LAURIE: Questions?

4 Yes, sir.

5 MR. DUGGAN: I'm Kevin Duggan, Capstone
6 Turbine Corporation.

7 I have a couple of questions in relation
8 to the chart up here now. One is SO₂. I'm not a
9 chemical engineer. My understanding was that if
10 sulfur goes into the process, then it will come
11 out, I guess, in one form or another.

12 And I also understood that there's
13 virtually no sulfur, that the sulfur's removed
14 from the pipeline gas. So, I'm just a little bit
15 curious to learn about the shaded areas for the
16 SO₂ that are listed up there.

17 Is it kind of something to do with the
18 comparison of the emissions of sulfur products
19 relative to a very very small number, anyway? Or
20 is it something else that I've misunderstood?
21 That's one of my questions.

22 The other question was the list of
23 things to the left up there are all technologies
24 with the exception of biomass. And I was trying
25 to understand or gain some understanding of what

1 the shaded areas mean for biomass relative to --
2 well, I know that you can use biomass, and I've
3 seen results, emissions results of biomass used to
4 fuel fuel cell and used to fuel a micro -- and so
5 different results with a different technology.

6 So, I'm just not being able to compute
7 what the message is from that.

8 MS. CARTER: Right, I think if I
9 interpreted your questions correctly, the first
10 question, what we're doing here, what these
11 circles mean is that it's a comparison to, if you
12 look at the bottom, it's comparison to the
13 combined cycle plant.

14 So, since the SO2 emissions on the
15 combined cycle plant are listed as negligible,
16 half circle means that it's generally about equal
17 to the combined cycle plant.

18 So, that's what that means, you know,
19 the actual emissions, themselves, are listed on
20 the table. And those technologies that have the
21 half circle are negligible in terms of that
22 particular emission.

23 In terms of the biomass question, the
24 biomass that we have right there is specifically
25 wood burning. And the fuel cells we used natural

1 gas, because that's generally what's used.

2 I know eventually we're hoping that fuel
3 cells will come into their own in terms of using
4 renewables as a resource. But currently it's
5 natural gas.

6 So the biomass that's up there is, I
7 believe that there's a footnote to that effect in
8 your handout, is the combustion of I think it's
9 dry wood.

10 So that's what we looked at there. Does
11 that answer your --

12 DR. TOOKER: Chris Tooker from the
13 Energy Commission. When you talk about setting
14 standards are you differentiating that from
15 precertification, or do you see them as being
16 similar?

17 MS. CARTER: I don't know that you can
18 handle everything in precertification, because you
19 have site-specific considerations, as well. I
20 don't --

21 DR. TOOKER: But I mean at least four,
22 let's say, are quality purposes. Recertification
23 might be similar to conceptually setting a
24 standard. You're working with, let's say, a
25 manufacturer --

1 MS. CARTER: I suppose if you set the
2 standard, I mean precertified, that's based on
3 that standard. I don't know if there are
4 unforeseen things that would come up, but it
5 doesn't seem like there would be.

6 DR. TOOKER: But you're saying that
7 there might be site-specific things in terms of
8 noise levels --

9 MS. CARTER: Oh, yeah, land use, I mean
10 there, you know, there are other things that you
11 need to look at, as well.

12 DR. TOOKER: Yes. Thank you.

13 PRESIDING MEMBER LAURIE: Ms. Smith.

14 MS. SMITH: Eileen Smith of the Solar
15 Development Cooperative. I like to see this chart
16 here. I wish that the air quality board had
17 something like this, Jeff, because even though you
18 don't have the money to do some things, at least
19 you're showing that photovoltaics and wind don't
20 have emissions. And I think that would be good to
21 have on your chart.

22 I'm just curious if the Natural
23 Resources Defense Council has done anything on
24 full-cost dispatch in terms of looking at the
25 overall economics of these technologies in terms

1 of long-term effects on pollution, from pollution.
2 Just have they done any studies, are you familiar
3 with any studies in terms of full-cost dispatch,
4 social costs and that sort of thing?

5 MS. CARTER: We haven't done anything.

6 MS. SMITH: Okay, that would probably be
7 something I would like to see happen, that would
8 be a part of the standards.

9 I think sometimes the standards get
10 created with limited focus. And like the fuel
11 cells there, I've just sat in on a hydrogen
12 conference last week, and this hydrogen
13 photovoltaic fuel cell is incredible. It's oxygen
14 and water in and water out. There's no pollution
15 whatsoever.

16 So, might want to see that expanded.

17 MS. CARTER: Well, I mean that's
18 certainly a technology we would love to see out
19 there. But this only looked at technologies that
20 are commercially available or expected to be
21 commercially available by 2003, and that's not one
22 of them.

23 MS. SMITH: Do you know why that is? It
24 doesn't seem to me like it's a cost problem. Is
25 there -- I mean I'm trying to figure out in my

1 evaluations as to why some of these pollution-free
2 technologies aren't -- I know why photovoltaics
3 isn't, which I tried to deal with in the CPUC
4 rulemaking, because it's to do with antitrust, but
5 I don't understand why some of these other
6 technologies -- what's the Natural Resources
7 Defense Council's perspective on that? Why are
8 they not in the market?

9 MS. CARTER: You know, maybe one of the
10 fuel cell representatives could answer that
11 question. I don't know. I thought that it wasn't
12 developed enough. All I know is it's not going to
13 be commercially available by 2003, and that there
14 were technology and cost issues. I can't tell you
15 exactly. I'm not --

16 MS. SMITH: That wasn't the impression I
17 got at the recent conference. The main thing is
18 just getting the mainstream market deployers to
19 deploy it.

20 And so I don't know if that maybe isn't
21 an issue that needs to be dealt with, even though
22 I've been told it's not. The antitrust issue,
23 that that seems to be the major block for
24 nonpolluting technologies.

25 PRESIDING MEMBER LAURIE: Yes, sir.

1 MR. DUGGAN: Sorry, just one more
2 question regarding the fuel cell figures here. I
3 notice that it's fueled by hydrogen from natural
4 gas. Should I take that to mean that the
5 emissions figures represented here do not include
6 any of the other chemicals that are contained in
7 the natural gas, and that are filtered out for the
8 hydrogen going into the fuel cell?

9 MS. CARTER: Yes, it's only the
10 pollutants that are emitted. That are emitted.

11 MR. DUGGAN: From fuel cells, which that
12 doesn't include the reforming, or any of the
13 emittants from the reforming?

14 MS. CARTER: No, because for example,
15 yeah, if you look at footnote F, it explains that
16 it takes it out.

17 PRESIDING MEMBER LAURIE: Thank you, Ms.
18 Carter, very much.

19 We'd like to move into the public
20 comment period. Ms. Grau, are you ready for that?

21 MS. GRAU: Yes, we are. So far I've
22 received three cards, Jerry Steele, I'm sorry, I
23 can't pronounce this, Mohsen Nazemi, and Eileen
24 Smith. So, --

25 PRESIDING MEMBER LAURIE: Mr. Wong

1 passed me his card I think about 7:30 this
2 morning.

3 MS. GRAU: Okay.

4 PRESIDING MEMBER LAURIE: So, you can
5 put his probably on top. We're going to ask that
6 comments be limited to five minutes, please. Let
7 me call on Mr. Wong first, then you can have your
8 list.

9 MR. WONG: Eric Wong with Caterpillar.
10 Commissioner, I really want to thank you for
11 taking this on. This is something that was
12 conceived of back in '96, April of '96. This was
13 referred to as a DG roundtable that the Energy
14 Commission initiated with industry, both
15 manufacturers and utilities.

16 I also want to thank Valerie Beck, who I
17 think is still in the audience here, and PUC for
18 all the efforts that they have exerted in this
19 area. I speak on behalf of industry, if I may, I
20 think we are pleased to see the amount of forward
21 progress that is being made in all of the areas at
22 the PUC, the Air Resources Board, the districts
23 and Energy Commission are pursuing.

24 I wanted to hit on why permit
25 streamlining is important, and there are four

1 reasons that I wanted to give. And we have
2 touched upon those, but I wanted to give a little
3 different spin to this, but I think I would be
4 touching upon many of the excellent presentations
5 that were done earlier.

6 The first reason is the impact on
7 manufacturers. If it hasn't been said before, I
8 do want to state that manufacturers are concerned
9 about having to, because of the different
10 standards that exist in different air basins, and
11 the different fire codes that exist in each
12 county, and we can go on and on, that you would
13 have to tailor make your product, your machine.
14 And that adds on costs and it's a good deterrent,
15 a huge deterrent for manufacturers.

16 The second reason is the impact on
17 project developers. There is a study that came
18 out, I believe, in '96, and, Judy, if you don't
19 have that, I'd be happy to pass it on to you.
20 This is a study that was done for the National
21 Renewable Lab. One of the principal authors is
22 John Nimmons who is active in this work.

23 And in essence that study said that any
24 day spent in hearings, evidentiary hearings, or
25 writing testimony for a DG project, and the costs

1 associated with that, would drive the economics
2 for a project to be uneconomic. Would just
3 literally push it off the table.

4 Those additional costs, we're talking
5 about very very price-sensitive variables here.
6 And we can even talk about that. I think Ken Lim
7 touched up on that when he talked about post-
8 combustion treatment.

9 The third reason is the impact on
10 communities. And I don't think I need to say much
11 more than just raise the phrase, environmental
12 justice. And the Commission has had experiences
13 with this, and the Air Resources Board has a
14 program called neighborhood impacts program.

15 I would urge the three agencies to
16 coordinate that, and I believe that Ellen
17 Townsend-Smith and Commissioner Pernell will be
18 doing that in their workshop next week Monday.

19 The last reason why permit streamlining
20 is important is the impact upon regulators. The
21 parties have, throughout the course of the PUC
22 proceeding on distributed generation, have
23 identified the cross-cutting issues. These range
24 from the need for precertification or the need for
25 standards.

1 We talked about here the availability of
2 offsets. This has market power implications to
3 it. The fact of the matter is that the
4 availability of offsets in the nonattainment air
5 basins is extremely limited, at best. If they are
6 available, they are very very expensive.

7 So clean technologies, even if they
8 produce negligible amounts of some pollutant, some
9 regulated pollutant, it would be expensive. This
10 adds costs on. So, we have many issues that you
11 have to deal with.

12 Now, this now raises the third point
13 about aggregation of distributed generation units
14 within a plan area, within an air basin, over a
15 certain number of years, or a certain number of
16 years within a planning horizon.

17 We can talk about maybe ten units going
18 in, whether it's x, y or z, microturbines, fuel
19 cells, combustion engines or advanced turbine
20 systems. But if you start to aggregate these over
21 time they raise offset issues, availability of
22 offset issues; they trigger new source review.
23 And we're talking about new facilities, not
24 talking about existing engines.

25 So the aggregation issue, I think

1 definitely needs to be addressed, and maybe this
2 can be addressed in the programmatic EIR. But you
3 may also be invoking the issue on jurisdiction.
4 You may be pushing that 50 megawatt limit. And I
5 don't know how the locals are going to handle
6 this, but to remain silent on this issue makes for
7 poor public policy.

8 Which I end up by saying that there are
9 many regional and statewide policy issues
10 associated with distributed generation. If you
11 think about California, as an entire state, entire
12 region, you could have development, depending upon
13 rules, market rules, air quality rules, the Energy
14 Commission rules, that is very disparate. And
15 this raises issues about equity. And, also as
16 well as land use planning policy issues.

17 So I think distributed generation is
18 pulling on many many sectors. It's much like a
19 spider's web, and you have to be concerned about
20 the interrelationships, each one, and to proceed
21 with blinders on will not make the best energy
22 policy for the state.

23 As I close here, I think within my five-
24 minute limit, I do want to state that the Energy
25 Commission, through some efforts of the

1 manufacturers, is trying to get the City of Irvine
2 to come up with a permit streamlining method that
3 would work for the City of Irvine for its
4 distributed generation project, distributed
5 generation/combined heat and power project.

6 I can't give you the final status of
7 that. I believe they haven't started, and if they
8 are going to start, the City of Irvine was
9 definitely committed to do this. Now there may be
10 some problems with that, but hopefully the city
11 was going to take a lead in this role. And I
12 would advise that the Commission talk to them.

13 Lastly, I would ask, Commissioners, as
14 one who sits on the R&D Committee, as well, that
15 the Energy Commission consider research and
16 development for the technologies, not only
17 existing, but the emerging technologies. I'm
18 going to put into that category natural gas fired,
19 spark-ignited engines on your list for R&D
20 consideration.

21 The Department of Energy is embarking
22 very soon with an RFP that would be released next
23 week on advanced gas reset engines that will, I
24 think, change the chart that Sheryl Carter put up
25 in terms of the lean burn engines. They're going

1 to be as clean, if not cleaner, in terms of the
2 stretch goals to do that.

3 We want to seek the states, I'm saying
4 we, being the engine manufacturers and the U.S.
5 Department of Energy, get involved with this
6 program. It has clear implications for
7 California. Hoping in your leadership role for
8 that committee that can be something that we want
9 to see some dialogue and hopeful commitment from
10 the Energy Commission.

11 Thank you.

12 PRESIDING MEMBER LAURIE: Thank you, Mr.
13 Wong, very much.

14 Ms. Grau.

15 MS. GRAU: Next we'd like to hear from
16 Jerry Steele, Air Quality Engineer with the
17 Monterey Bay Unified Air Pollution Control
18 District.

19 PRESIDING MEMBER LAURIE: Afternoon, Mr.
20 Steele.

21 MR. STEELE: My name's Jerry Steele.
22 I'm with the Monterey Bay Unified Air Pollution
23 Control District.

24 I'd like to thank the Energy Commission
25 for requesting the district's input on this

1 important issue.

2 I have two points to make very quickly.
3 First, I wish to address the Commissioner's
4 question regarding when a permit is discretionary.

5 Our district's legal counsel and
6 planning supervisor have determined that all
7 operating permits issued by Monterey Bay are
8 discretionary. And therefore, all sources in our
9 district with emissions that exceed defined levels
10 of significance require some sort of review under
11 CEQA.

12 PRESIDING MEMBER LAURIE: Is that
13 determined on a district-by-district basis, to
14 your knowledge?

15 MR. STEELE: I believe there's
16 difference of opinion among districts on that
17 issue, yes.

18 Second, I wish to state our district's
19 main concern, the DG sources processing, proposing
20 to use IC diesel engines must be completely
21 evaluated relative to the health risk they may
22 cause.

23 Particular concern centers around
24 converting existing relatively dirty emergency
25 standby type units to DG. These units do not meet

1 BACT and are permitted for a limited number of
2 hours, and for emergency during power failure,
3 where the benefit obviously is greater than risk.

4 However, this test fails if the unit is
5 used for longer periods, and the public may be
6 exposed to significant risk.

7 In addition, in these cases, cumulative
8 impacts must be evaluated on a case-by-case basis,
9 as well as applying BACT, best available control
10 technology.

11 Thank you.

12 PRESIDING MEMBER LAURIE: Thank you,
13 sir, very much.

14 MS. GRAU: Next we'd like to hear from
15 Mohsen Nazemi, Assistant Deputy Executive Officer
16 with South Coast Air Quality Management District.

17 PRESIDING MEMBER LAURIE: Welcome, sir.

18 MR. NAZEMI: Commissioner, I thank you
19 for the opportunity to provide comments and input
20 into this workshop.

21 I'm with South Coast Air Quality
22 Management District, the only extreme
23 nonattainment, ozone nonattainment area in
24 California and the whole country.

25 As a result of our severe air quality

1 problem, we have embarked on a number of programs
2 early on to address specific sources of air
3 pollution, including power generation.

4 Over a decade ago we worked on a
5 regulation that dealt specifically with utility
6 boilers and provided systemwide ratcheting down of
7 emissions for the utilities in our area, mainly
8 five utilities in our area.

9 We also have a market incentive program
10 called regional clean air incentive market, or
11 ReClAIM, where all of our utility power plants are
12 in that program, and they have a cap that annually
13 decreases. And they have to comply with that
14 through retrofitting or purchasing credits.

15 And as you heard from many speakers
16 here, the cost of credits getting more and more,
17 so there are cleaner and cleaner technologies
18 coming on board.

19 I don't want to reiterate everything
20 that the Air Resources Board and other districts
21 said, so I'll just narrow down my comments to: We
22 are dealing with new power plant, a large power
23 plant coming into this area. Your Commission is
24 very familiar with that.

25 We have two of them, Mountain View and

1 New Visalia in our area. And as you can tell the
2 technologies that are being utilized are resulting
3 in very negligible emissions per megawatt per se,
4 but these are still large sources. I don't want
5 to minimize the impact of these types of plants.

6 In general, South Coast supports cleaner
7 technology. We have a technology advancement
8 office that invests heavily in support and co-
9 sponsorship of new technologies such as fuel cells
10 and others.

11 However, there are, as you heard today,
12 a number of issues with DG, specifically with the
13 different types of technologies. There is a wide
14 range of air quality impacts associated with them,
15 and some of it are orders of magnitude different.

16 Specifically I want to focus on diesel.
17 We have a great concern with diesel. Our
18 governing board is very sensitive to environmental
19 justice issues. And in '98 we had a 12-point
20 initiative, and one of them was to do a very
21 comprehensive year-long study, what we call MATE
22 study, where we went up and monitored in 15
23 different locations in South Coast, 30 compounds,
24 air toxic compounds.

25 And after a year-long monitoring and

1 several months of discussion with various groups,
2 the final result of that study shows that the
3 average cancer risk in South Coast is around 1400
4 in a million. And 70 percent of that is
5 associated with diesel particulates.

6 So, it's a significant source of concern
7 to us. And, in fact, as I speak right now, we are
8 embarking on something brand new to us, which is
9 fleet rules. Which ordinarily dealt with
10 stationary sources, now we're looking at how can
11 we deal with buses and trucks that contribute to
12 this. And I have to admit, most of this is diesel
13 mobile, not stationary source.

14 However, we do have concerns with
15 stationary source diesel. Right now we only have
16 emergency IC engines powered on diesel. And those
17 are only used during power outages. Even with
18 those we have great problem getting the permits
19 because, as you know, the Air Resources Board has
20 designated diesel particulate as a carcinogen.
21 And it has, in fact, in Davis today, a CAPCOA
22 Committee, and I had to miss that meeting to come
23 here, is trying to come up with a policy on how to
24 permit even emergency and low-hours operating
25 engines. Because they don't pass the risk levels,

1 frankly, that are associated with it.

2 The other fossil fuel fired
3 technologies, however, are cleaner than diesel,
4 but again, I don't want to diminish the fact that
5 they have emissions that are, at times, on the
6 aggregate of concern. That when you have to look
7 at all of them in the basin, they would constitute
8 a significant impact.

9 And they are, in general, when you
10 compare them to a large power plant, not as clean
11 as the technology that are used at large power
12 plants. But there are other technologies, as you
13 heard today, that are clean and should be
14 promoted.

15 As far as the CEQA issues go, South
16 Coast does not support a categorical exemption at
17 this point. We feel that because of the range of
18 different technologies that there are going to be
19 toxics issues associated with them. And there has
20 to be a site-specific analysis done, especially
21 for sensitive receptors that might be near the
22 project.

23 As far as the lead versus responsible
24 agency, I think a question was raised, and I
25 believe that there is a pretty good guidance on

1 their state CEQA guideline section 15051 and
2 15381. So it's pretty clearly defined who's in
3 the lead, who is the responsible agency.

4 And we support the same concept, that
5 that should be followed. That we shouldn't try to
6 change that.

7 As far as whether or not a program EIR
8 should be done, we support that. We think it's a
9 good idea if the rulemaking that the PUC is
10 conducting meets the Public Resources Code
11 definition for a project, we feel that a program
12 EIR could assist local permitting agencies in
13 tiering off of that EIR for their local permitting
14 CEQA process. So it does provide some assistance.

15 I want to emphasize that streamlining is
16 something that South Coast supports. We had a
17 year-long board chaired committee that worked on
18 permit streamlining. They came up with 34
19 recommendations. We have initiated and completed
20 some of those implementation of the
21 recommendations.

22 We have participated early on, similar
23 to the Bay Area, in the DG roundtable discussions
24 that the Energy Commission held. And we have
25 created various programs, precertification. And

1 South Coast is a little more successful than it is
2 in Bay Area. So for those of you who want to get
3 your engines precertified, we have several engines
4 that have been precertified in South Coast where
5 you don't need to get a permit, you don't need to
6 worry about CEQA. You can just go ahead and give
7 us a copy of that certified equipment from the
8 manufacturer and just install the equipment. It's
9 over-the-counter type permitting.

10 There's also other programs, express
11 permitting, and under our new source review
12 program, we have exemptions for small sources,
13 what we define as less than four times per year
14 sources.

15 So there is a lot of amount of effort
16 put into streamlining permitting, and getting
17 cleaner technologies, and off-the-shelf type
18 technologies off the board.

19 So we don't want to promote any
20 confusion here in terms of technologies. We think
21 identifying requirements up front is very helpful,
22 also streamlines the process.

23 And I apologize for not giving you any
24 written comments. Frankly, I've worked with the
25 Energy Commission for a long time and I know

1 usually your public participation process is very
2 elaborate, and no agency comes close to you, but
3 this one, frankly, was a very short notice. And
4 there wasn't adequate time.

5 And I hope the April 14 deadline is not
6 meant as the final drop-dead date for giving you
7 any meaningful input to this process, because I
8 think it's a very important process.

9 PRESIDING MEMBER LAURIE: And the answer
10 to that is your written comments are always
11 welcome, at such a point as you can do it. And we
12 very much appreciate your ability to be here
13 today.

14 MR. NAZEMI: Thank you.

15 PRESIDING MEMBER LAURIE: Thank you,
16 sir.

17 MS. GRAU: Our final speaker in the
18 public comment period is Eileen Smith, Solar
19 Development Cooperative.

20 MS. SMITH: Eileen Smith of Solar
21 Development Cooperative. Thank you for having me
22 here today, and for having this meeting.

23 Air quality is something I have been
24 strongly concerned about for a long time. And I
25 guess when we all look around, we go out of this

1 meeting today, and all these meetings that have
2 taken place over many many years, and say, where
3 did we go wrong.

4 Because almost every day you can see in
5 the skyline in California pollution. And even
6 though California has really strong rules and
7 laws, and there's lots of regulations, I think
8 there's some reason that this is slipping through
9 the cracks.

10 And I just guess that I would try and
11 inspire people to find out why. I think the fact
12 that no-emissions presentations, there were no
13 pictures of no-emission technologies here. And I
14 think we need to really push this no-emission
15 technology to get rid of some of that pollution.

16 When we talk about permit streamlining I
17 get really nervous. I'm an architect. I'm not an
18 energy person actually, per se. I'm in
19 photovoltaics. I've been in business for eight
20 years, been all over the world, speaking on the
21 subject of photovoltaics. And actually came to
22 California to build a solar voltaic dome that was
23 patented by a gentleman in Irvine.

24 I found the process of getting
25 assistance to build no-emission technology nearly

1 impossible in this state.

2 I'm not sure why that is. Maybe -- I
3 don't know. It's a complicated thing, I think
4 there should be, in place, a specific set of
5 contact and project review process in place, not
6 necessarily an application for a grant, but just
7 when a person comes and contacts the CEC or CPUC
8 about a project, they should be sort of registered
9 as an active person pursuing a certain goal. So
10 that that person doesn't get side-lined.

11 I didn't even know what a rulemaking
12 was, and I just asked how come they weren't
13 mentioning self-generation technology in the
14 papers and educational materials for deregulation.
15 And Michelle Puff, the ALJ now for this rulemaking
16 that's going on, she said, well, why don't you
17 bring that actually up, and you know, I says, why
18 don't you bring that issue and the issue of
19 antitrust, which is a strong issue. I think
20 that's one of the reasons we're not seeing as much
21 information about no-emission technology. Simply
22 because it's being suppressed by oil cartels. And
23 you can read all about them on my website, which
24 is at the bottom of the document.

25 She asked me to bring that up in May of

1 '98. I brought it up. Twenty-one months later
2 she makes a decision as an ALJ saying there's no
3 place in this rulemaking for antitrust issues.

4 It's very confusing, and a very abusive
5 process, because I don't really have the resources
6 to try and figure out what's going on here. It's
7 been a very very difficult process.

8 I think for small business there needs
9 to be some sort of a group or a mentorship for
10 government liaison for small businesses that will
11 deploy this stuff and put it in the market.

12 Now, if you want to compare big business
13 versus small business, in 1994 I put together a
14 15-year, \$4 billion business plan to do 200,000
15 homes worldwide and 1000 solar domes. That's the
16 dome that was patented by Carl Hedrick in Irvine.
17 We still don't have one dome built.

18 But the interesting thing is, is now
19 British Petroleum owns about 70 percent of the
20 photovoltaic manufacturing in this country, and
21 they put together a \$1 billion business plan
22 between now and the year 2010. So, I said, well,
23 thanks for leaving the other 49 billion of it for
24 the rest of us.

25 But the problem is, is how are we going

1 to get that other \$49 billion of business
2 together. And I don't think we're going to get it
3 together by haggling over one or two pounds of
4 emissions. I think we really have to get very
5 proactive about deploying no-emission
6 technologies.

7 And I know that one of the reasons, I
8 wrote in my paper here, and I'm sure probably some
9 of you have seen it, Commissioner Pernell came up
10 and said he's a little confused about how genocide
11 issues have to do with air quality standards.

12 Well, that takes some thinking, and I
13 think you have to read the paper and, if you still
14 haven't figured it out, give me a call, I'd be
15 glad to get together and talk to you about it.

16 But it has to do with antitrust issues.
17 It has to do with -- I guess another concern I
18 have with the air quality is their whole emissions
19 evaluation was based on the price, and you had
20 diesel fuels up there as the least cost.

21 We need to stop playing that game. It's
22 not real. You can't say that the worst emission
23 technology is the lowest cost. You haven't done
24 your homework and you haven't put together a
25 comprehensive view of that technology.

1 Go to the hospital, talk to some of
2 those people dying of cancer. And then come back
3 and reevaluate. I'm not trying to be facetious,
4 but you have to get in touch with reality of
5 what's happening.

6 To pick some of the pictures I put in
7 this paper, I saw Amy Goodman speak in November of
8 '98. I couldn't believe what she was saying. I
9 went down and chatted with her, you know, just to
10 see if this was real.

11 But --

12 PRESIDING MEMBER LAURIE: Ms. Smith, I'm
13 going to ask you to address the topic that is the
14 subject of this workshop. And that's CEQA and
15 permit streamlining. And you have two minutes
16 left. I would suggest you get to the point.

17 MS. SMITH: Well, the point is that
18 genocide does have to do with streamlining CEQA
19 permits. It has to do with people who have more
20 resources than they need to push their projects
21 that are going to continue to increase the
22 pollution in this area.

23 And we also look at pollution in terms
24 of global impact. And the global impact of the
25 energies that we deploy, whether it's through

1 genocide or pushing through polluting
2 technologies, affects the quality of life for
3 everyone.

4 So, I think just read through the paper
5 and you'll find out, I think, some more of the
6 problems related to CEQA permitting. I understand
7 people, why Capstone, I think, is probably one of
8 the best technologies I've seen in terms of any
9 kind of fossil fuel technology in the DGH
10 industry. It seems to be the most classically put
11 together; it's very well designed; it doesn't have
12 a lot of emissions.

13 But those are not going to be the
14 projects that are going to be the ones that get
15 pushed through. I have a tremendous concern that
16 they are projects with the same kind of unethical
17 business practices that go on as ENRON in India
18 pushing through things just simply by push, push,
19 pushing with lots of money behind it and a lot of
20 unethical activities. That we will have more
21 emissions.

22 So, I think the thing that I want to
23 emphasize here is that if somebody pushes through
24 a project in a noncompliant area, we can't just
25 fine them. We have to disconnect them. You can't

1 just allow somebody to continue that.

2 And I think that if there isn't some
3 sort of very straightforward reprimand in mind,
4 and you just put forward fines, we're going to
5 have the air pollution really increase.

6 I hate to end, to have that sort of a
7 negative note. But on the more positive I think
8 if you get the worst out, and you start
9 addressing, the worst issues out on the table and
10 start addressing them, then we don't have to
11 breathe the results of not dealing with them.

12 Thank you.

13 PRESIDING MEMBER LAURIE: Thank you very
14 much.

15 Any additional public comment at this
16 point? We do have some finish-up work to do. I
17 would like to take about a 12-minute break, and
18 then, Judy, do you think we have about an hour max
19 to wrap up?

20 MS. GRAU: I think --

21 PRESIDING MEMBER LAURIE: Okay. Let's
22 take a few-minute break. We'll see you back here
23 at 3:15.

24 (Brief recess.)

25 MS. GRAU: I think we've heard a lot of

1 things today. I was trying to take notes, but it
2 was kind of hard sometimes. But I just want to
3 recap a little bit of what we've heard today.

4 I think we've learned that DG is not one
5 single technology, but it's a range. Diesel seems
6 to be in a category all itself, as we've heard
7 from the air pollution control districts about the
8 carcinogen nature of it and such.

9 It seems to me that renewables are also
10 in a category by themselves with no emissions. We
11 didn't get to talk about storage technologies
12 today, but maybe they are another separate
13 category by themselves. They don't emit anything.
14 But the source for charging up the storage
15 technology, of course, is probably another
16 generation source that may be polluting, although
17 the storage technology is not, itself.

18 And then the fossil fuel technologies
19 may be in another category, not including diesel.

20 We've heard that interagency
21 coordination is essential. I know I learned from
22 Chris Kinne that the CalEPA, CalGOLD website
23 sounds like a wonderful opportunity for us to do
24 some streamlining there by becoming involved in
25 the opportunity to update the website for DG

1 technology, so that if people are interested in
2 keying in on what I think is called the industry
3 category, if we can help out there and get a
4 database going, that would be really helpful.

5 The local governments are obviously the
6 key targets for what we're doing. They are
7 responsible for the CEQA review and the permit
8 process. And we need to get them included to the
9 extent possible.

10 We heard a lot about having a
11 performance standards, a target for the
12 manufacturers to shoot for. If they know what
13 they need to do, they can meet it, that's what
14 we've heard.

15 We've also heard that the Energy
16 Commission can provide some guidance documents.
17 I'm not quite sure what form those would take, but
18 we have the opportunity to use our expertise
19 across the board in all the divisions of the
20 Commission to support this effort.

21 We've heard a lot of support for
22 pursuing the idea of a programmatic EIR approach.
23 One key audience I think that's missing today, but
24 that was invited, are the local planning agencies.

25 We've heard from the air districts, but

1 we haven't heard, at least here, they may be
2 listening on RealAudio, from some of the local
3 planning agencies who were invited. We invited
4 over 500 city, county planning agencies.

5 And we also invited all of the building
6 department contacts. We had a list of about 500
7 of those, too.

8 So, there's a lot of potential for
9 hearing more input, I think. And we discussed a
10 little bit about extending the comment period.
11 Perhaps we should put a closing date on that.
12 Maybe a couple of weeks or so, whatever your
13 thoughts are on that, Commissioner Laurie, I'd
14 appreciate that. But I think we could put
15 something up on our website about extending the
16 comment period.

17 And one more thing, to all of the
18 presenters today who had presentations, if you
19 would make available your presentations to us to
20 put up on our website, we would like to do that,
21 also, to get out, make this available to the
22 public to the extent possible.

23 I guess with that in mind, if anybody
24 else has any views out there they would like to
25 express, short-term or long-term goals for our

1 Commission as they relate to CEQA streamlining or
2 permit process streamlining, we'd like to get your
3 thoughts before we close here.

4 PRESIDING MEMBER LAURIE: Judy, I'm
5 interested in the question that's raised about
6 what kind of documentation, if the State of
7 California were to undertake a large-scale generic
8 general environmental analysis that can be used as
9 a programmatic or master EIR type of document.

10 There are legal questions as to what
11 kind of documentation can be justifiably relied
12 upon by local agencies. And we really need a
13 sense from those local agencies what they're
14 willing to respond to.

15 I would be inclined to want to
16 communicate to local organizational planning
17 agencies, and specifically ask that question. And
18 I'd like to give them some time to respond. And
19 I'd like to do that forthwith.

20 So, working back from the timeframe
21 under which we're obligated to file our report
22 with PUC, how much time do you think we have to
23 ask those additional questions, to make further
24 inquiry, in light of the information that we
25 receive today, and get answers back in time to

1 incorporate such in our discussions?

2 MS. GRAU: Well, as I mentioned briefly
3 this morning when going through the schedule,
4 ideally we would have our staff workshop report
5 out by the end of June. So, that leaves us just
6 about two months to get the questions out there
7 and get the responses.

8 We did receive one, or I should say one
9 of our staff members had a conversation with a
10 League of California Cities representative, and
11 she had some great ideas for doing some outreach
12 for us to get out there. And the person had
13 mentioned, she was a council member for the City
14 of Novato.

15 It's very hard for a lot of these folks
16 to come here to this meeting. And her suggestion
17 was you can reach a lot more folks by going out to
18 them in the forums where they meet.

19 And I think we should try to look for
20 opportunities to do that as soon as possible.

21 PRESIDING MEMBER LAURIE: Okay. Do you
22 have a recommendation as to what the cut-off
23 period could or should be for additional written
24 material?

25 MS. GRAU: Do I have a suggestion>?

1 PRESIDING MEMBER LAURIE: Yes.

2 MS. GRAU: Oh. I was going to give two
3 weeks from tomorrow perhaps -- May -- sorry -- no,
4 it would be earlier than that, May 5th, yeah.
5 Friday, May 5th. That would be my suggestion.

6 PRESIDING MEMBER LAURIE: At close of
7 business?

8 MS. GRAU: Yes.

9 PRESIDING MEMBER LAURIE: Okay. And
10 then can you briefly again go over what our next
11 steps are?

12 MS. GRAU: Well, part of that I think we
13 have to go back and digest what we've heard today.
14 But, I think we need to look back at the questions
15 that we asked and the responses that we've gotten,
16 and look a little bit at our charter that we got
17 from the PUC. And then try to put that together
18 in some coherent plan of action.

19 I think one of the keys is this
20 outreach, getting all the parties involved who
21 have a stake in this. And educating them and
22 being educated by them about what their needs are.

23 And beyond that, like I said, I think we
24 have to kind of go back and digest all this.

25 PRESIDING MEMBER LAURIE: Okay. CALBO

1 is not here today, is that correct?

2 MS. GRAU: No, but we used the Energy
3 Commission's CALBO list of 500 building
4 departments, and they all should be aware of the
5 workshop.

6 PRESIDING MEMBER LAURIE: Okay. Any
7 closing questions regarding process, regarding --
8 well, primarily regarding the process that we
9 intend to follow over the next weeks?

10 Yes, ma'am.

11 MS. SMITH: That's a question I have,
12 what can we do to become more involved in this in
13 a constructive manner, small business and that
14 sort of thing, to make sure that we're involved,
15 especially to promote no-emissions technology. Of
16 bringing into manufacturing and --

17 PRESIDING MEMBER LAURIE: I don't know
18 how you could be more involved than you are. You
19 are among a small handful of individuals in the
20 State of California that is involved in this
21 issue. You've been on the teams, you've been
22 participating to the same extent as all other
23 interested stakeholders in a very positive manner.
24 I don't know what more there is that any
25 individual can do.

1 Ms. Grau, is there something else going
2 on that one can do? There are organizations, I
3 guess, involved in distributed generation, that
4 are active, but I don't know how you'd be -- the
5 individual representation that you're doing,
6 yourself.

7 MS. SMITH: I would like to maybe see
8 some sort of a small business group or something
9 that helps us more effectively intervene.

10 PRESIDING MEMBER LAURIE: Well, you'd
11 make a great chairman of such an organization.
12 And we would certainly -- any organization that
13 allows us to communicate with many through one
14 would be very helpful to us, most certainly.
15 Chamber of Commerce is a good example.

16 MS. GRAU: Yeah, and, Eileen, I don't
17 know if you're familiar with CADER, California
18 Alliance for Distributed Energy Resources. But,
19 we're always looking for new members there and a
20 variety of perspectives. And the website address,
21 I believe, is www.cader.org. And --

22 MS. SMITH: You know, I contacted them
23 several years ago and was invited to be on the
24 communications team, but as Shirley Rivera will
25 testify, I was not allowed to say anything. So,

1 that's not what I consider communication.

2 MS. GRAU: We've reorganized the
3 committees, and the structure is a little
4 different. But, --

5 MS. SMITH: I know, the problem is --
6 and I understand this and I respect that, it's a
7 political process we're going through and it's
8 very complicated and very intensive on lots of
9 different sides.

10 And I think that the communications have
11 freed up some since that particular intervention
12 that I had with CADER. But, it's difficult,
13 especially when you don't have much resources. I
14 know my intervention in this rulemaking has been
15 with a nonexistent budget. It's been very very
16 very very very very difficult.

17 And, you know, I would really rather
18 maybe form an organization for small businesses,
19 per se.

20 PRESIDING MEMBER LAURIE: Thank you very
21 much, and your input is appreciated.

22 Ladies and gentlemen, if there's nothing
23 else, this conference has been a wonderful benefit
24 to the Energy Commission. I hope your time has
25 been well served.

1 We do have another workshop coming up in
2 pretty short order, and we look forward to that
3 discussion.

4 With that, and, Ms. Grau, absent
5 anything else, the meeting would stand adjourned.

6 MS. GRAU: Thank you.

7 PRESIDING MEMBER LAURIE: Thank you very
8 much.

9 (Whereupon, at 3:32 p.m., the workshop
10 was concluded.)

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